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WITH THE
ARMY SERVICE CORPS
IN
SOUTH AFRICA

BY
SIR WODEHOUSE RICHARDSON.

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1871-1900

WITH THE
ARMY SERVICE CORPS
IN
SOUTH AFRICA

BY

SIR WODEHOUSE RICHARDSON, K.C.B.,
COLONEL (LATE ARMY SERVICE CORPS), DEPUTY ADJUTANT-GENERAL
FOR SUPPLIES AND TRANSPORT IN SOUTH AFRICA, 1899—1900.

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Preface.

WHILE in South Africa, I kept a diary in which I hastily jotted down rough notes on passing events, as they came under my notice from day to day.

I have ventured, in the following pages, to publish extracts from this diary, hoping they will prove of some use to those officers who may be called upon to administer the supply and transport services in any future campaign.

W. D. RICHARDSON.

DEVONPORT,

1st September, 1902.

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WITH THE
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IN
SOUTH AFRICA.

CHAPTER I.

Preparations at Home.

On the 10th September, 1899, I heard from Sir Redvers Buller that the Secretary of State for War had approved of my "appointment as officer commanding Army Service Corps on the headquarters staff of the expedition proceeding to South Africa, with Colonel Bridge, Army Service Corps, under me, as Director of Transport."

On the 12th September I met Sir Redvers at Crediton, on the 14th I interviewed the Quartermaster-General and the Assistant-Quartermaster-General, Army Service Corps, at the War Office, and on the 16th I embarked at Southampton, for Natal.

Before leaving England, I submitted the following recommendations regarding the supply and transport service, which, from my previous experience in South Africa, I was anxious to see adopted :—

"Inoculation of Cattle against Lung-Sickness."—Whenever possible, all slaughter cattle and transport oxen (whether hired or purchased) should be inoculated against Lung-Sickness. This is a simple operation when a veterinary surgeon is employed, and was practised with success in Bechuanaland, in 1885; whereas in Natal, in 1881, thousands of uninoculated cattle died from the disease.

"Veterinary Officers."—One or two should be permanently attached to the Army Service Corps, on each line of communications ; if possible, men who have some experience of, and take an interest in, the ailments of mules and cattle.

In 1887-8-9, and again in 1881, it was most difficult for transport officers to obtain the services of a Veterinary Officer for their mules and cattle, of which many hundreds were often sick at a time.

"Quartermasters."—One should be appointed to each Headquarters Staff as Camp Quartermaster. This is most necessary, otherwise the work has to be performed by a staff officer, who probably will not understand it and who may be urgently wanted for other duties.

"Paymasters."—One or two should be attached to the Army Service Corps with each force, to pay for supplies on the spot, also to pay native labourers. Supplies will generally be obtainable in larger or smaller quantities if they are paid for in cash ; while, if Army Service Corps officers are hampered with large imprests, their other work must suffer.

"Cycles, instead of Horses, for Departmental Officers."—Almost every Chaplain, Paymaster, Ordnance and Medical officer applies for a government horse, on service, and it is often difficult to decide whether he really requires one or not. If these officers are indifferent riders the horses suffer.

Now, if a small allowance, say, 1/6 or 2/- a day, were given to these officers, on condition that they used bicycles—their own property—instead of a public horse, many of them would jump at the proposal. The cost would be small, as compared with the value of the horse and his forage, and the provision and transport of the latter is always a very serious question for the Army Service Corps, on service.

"Cycles for Army Service Corps Subordinates."—All Butchers, Bakers and Clerks might be allowed to take their bicycles with them : and, when using them on the public service, to draw the regulated allowance.

These men at the end of a fatiguing march have often to bake all night and get knocked up : whereas, with the aid of a bicycle, they would reach camp comparatively fresh and fit for immediate work.

"Army Service Corps Supply Equipment."—This might be looked over and brought up to date. Some of it was in a bad condition from rust, etc., when I examined it a few years ago. The cumbersome baking troughs are obsolete and could hardly ever be carried in an enemy's country, even if transport was unlimited. Dough-making machines and, at any rate, small folding troughs should be supplied.

"Army Service Corps Mule Harness."—This should be sent from home. That obtained locally is most inferior in every respect.

"Railway Sidings."—It might be desirable to lay down sidings for, say, 200 trucks at points near the frontier where troops are likely to be concentrated and depots established. This might be done without attracting any great attention if the work was carried out by the local railway authorities as ordinary extension work. The War Department would, of course, have to guarantee the cost.

"Corps of Native Labourers."—Such a Corps is most necessary to load and unload vehicles, to assist in the Ordnance stores and to help troops on general fatigue work, which may be heavy. The Corps should be properly organised, with a certain number of British officers; those who can speak the language and are tactful are to be preferred. Native labourers will require little clothing—a great coat and pair of boots, with perhaps a fez or woollen stable cap as a distinguishing badge. The class of native is important—Cape boys are drunkards, Bechuanas will bolt at the first shot, while Zulus are lazy though plucky; perhaps Basutos or Natal Kaffirs might be best. The boots are important, especially on the Western border, which is covered with low thorn bushes, and where natives usually wear sandals.

"Storehouses."—Long iron storehouses, with single gable roofs, might be at once erected on the railway near any points fixed upon for the assembling force. These would prevent damage by wet, besides protecting spirits and hospital comforts from theft.

"Preserved Meat."—A large proportion should be in $\frac{3}{4}$ lb. or 1 lb. tins for issue to individual soldiers, when required to carry one or more days' reserve rations on the person. If issued in larger tins, each man eats what he wants at the moment, and the remainder is wasted, as it is almost impossible to carry a tin once it has been opened. The cost may be higher, but it is compensated for many times over by the saving in waste.

"Meat Tin Openers."—Each case of preserved meat should contain a meat tin opener. They cost a mere trifle, but are most necessary, and, if not supplied, troops will break their knives and bayonets opening the tins, besides spoiling a portion of the contents.

"Biscuit."—This should be of the very best quality, and should be manufactured so as not to be easily broken up when

carried in cases or on the person. It would be of great assistance, in distributing rations regimentally, if each biscuit weighed 2 or 4 ounces.

"Flour."—The best Australian Flour should be supplied. It could be bought at the Cape years ago, and no doubt is obtainable there now. It should be in 100lb. bags, not in 280lb. sacks which easily burst, with the result that a portion of the contents is wasted.

"Dough-making Machines."—Such machines, worked by oil or gas-engines, are now in use in almost every large bakery, at home. They save an enormous amount of manual labour. Portable machines, to be worked by steam or oil-engines, or by horse-power, could no doubt be supplied by any large manufacturing firm in the trade. They should be so constructed as to be easily loaded on a railway truck, mule or ox wagon. When it is considered that, on service, a baker must often march all day and bake all night, the advantage of such machines will be obvious; besides, the cumbersome dough-troughs will be dispensed with.

"Lime-juice."—Powdered Lime-juice can now be obtained, 2 or 3 ounces of which make several gallons of a very palatable beverage. It is, thus, far more portable than Lime-juice in barrels or bottles. The medical authorities would have to be consulted before this powder could be adopted.

"Tea."—Compressed Tea might be supplied, as it is so much more portable than Tea in chests or cases, and less liable to damage. Each cake might be divided into sections having a fixed weight of, say, 10z., 20z., or 40z., to assist regimental distribution.

"Jams."—These are much appreciated by troops, and are a good anti-scorbutic, when fresh vegetables are unobtainable. Soldiers usually detest compressed vegetables and preserved potatoes. A 1lb. tin, per man, per week, might be a sufficient ration.

"Oats."—Considerable quantities used to be grown in the Cape Colony. They were readily eaten by horses and mules during the Bechuanaland expedition and, though light, are preferable to mealies. Oats sent from home should be slightly kiln-dried, otherwise in a hot and damp climate they are liable to sprout in the sack and deteriorate.

"Grass-cutting and Haymaking Machines."—These might be sent out, with men accustomed to their use, to cut grass and make hay for cattle and horses.

"Obtaining Supplies by Requisition."—Some suitable form for obtaining supplies by forced requisition on the inhabitants, either with or without payment, might be provided.

"Soap."—This should be an Army Service Corps and not an Army Ordnance supply, as present Regulations insist.

"Packages."—All supplies sent from home should be packed in cases not exceeding 80lbs., gross weight. Packages of Ordnance stores and bales of clothing should also be as small as possible, unless they are to be unpacked and issued at a main Ordnance depot, say, at Cape Town, Pietermaritzburg or Durban, where there is always plenty of labour and storage room. Serious damage is caused to the contents of heavy bales of clothing, and of unwieldy vats or cases containing saddlery, etc., which can only be loaded and unloaded with difficulty. Owing to their weight and size they cannot be stacked and covered with sail-cloths to protect them from the weather. As a general rule, no package weighing over one hundred-weight should be sent to the front in mule or ox wagons; greater weights can be sent by rail without much difficulty, but they should be unpacked before being sent further away.

"Canteen Supplies."—It might be desirable to give a few large and respectable firms the monopoly of malt liquor and other Canteen Supplies at fixed retail rates, and to refuse to allow crowds of extortionate sutlers to settle near every camping ground, as was the case in Natal, in 1881. Such men demoralise native drivers and other civil employés by selling them drink on credit, holding their pay-books as security for future payment.

"Forms of Contract."—The Director of Contracts might supply the Army Service Corps with a small pamphlet of the most suitable forms and conditions of Contracts for troops on service in South Africa. It is most difficult for a young officer to sit down and run off a legal agreement for the hire of grazing or camping-grounds, for the supply of provisions or forage, or for the conveyance of stores, etc., by weight or time.

"Wire-cutters."—These are likely to be required, as a good deal of enclosed land may have to be crossed.

"Ambulances."—These should all be fitted with the South African brake. The cogwheel or crank-brake will quickly be put out of order over the rough South African roads. Bad cases of sickness, and patients with broken limbs, can hardly be moved in General Service Ambulances over such roads, and these vehicles are consequently of but little use in the

country. In 1881, all wounded had to be brought from Mount Prospect to Newcastle, in Natal, on stretchers. These latter should be fitted with light hoods to keep the sun off the sick or wounded.

"Fly-whisks and Mosquito-curtains."—These should be supplied for all hospitals, as both flies and mosquitoes are terrible plagues during warm, damp weather.

"Water Carts."—Iron tank carts with seats for the drivers should be used, not barrel-carts, with which many accidents and several deaths occurred, between 1877 and 1885. Drivers must either get wet or sit across the barrel, when crossing or obtaining water from a drift; and as they can get no grip on the barrel with their legs, they are, not unfrequently, jerked off under the draught animals or under the cart and injured and sometimes killed.

"Water Tanks and Troughs."—These will be required in large numbers. Those used in the recent manœuvres, and made of canvas or indiarubber, would seem excellent for the purpose. A large number of hand pumps will also be wanted to fill water-carts, troughs, and tanks.

"Dead Cattle, Mules or Horses."—Do not attempt to bury these, but drag to a distance from camp and water, cut the hides in several places, and let the vultures do the rest.

"Justices of the Peace."—It would be advisable to make all officers, who have constant dealings with natives and civilians, Justices of the Peace for the particular colony in which they may be serving. By this means, trouble is saved in dealing with sutlers and native employés, who, so long as they are actually in a British colony, are not apparently amenable to military law, even though military operations may be actually in progress.

"Coal."—This will probably be largely used as fuel, and troops, likely to be employed in South Africa, should at once be practised in cooking their food in field kitchens with coal instead of wood.

"Forage for Horses."—As mealies may often have to be issued as the whole or greater portion of the Forage ration, it might be advisable, in order to accustom them to this food, to at once issue Indian corn as a portion of their ration to all horses and mules likely to be employed in South Africa.

"Hobbles."—As it will often be impossible to carry a hay ration, horses and mules must be grazed. In order to prevent the possibility of animals being stampeded, while grazing,

English cavalry and other horses might be hobbled, as neither the horses nor their riders take readily to the use of knee halters. To practise the horses, the hobbles might be used on them at once.

"*Tobacco.*"—It might be advisable to supply a milder description of tobacco than that usually sold in canteens, which is often so strong that it is likely to affect the men's shooting in a hot climate.

It will, I think, be admitted that the adoption of several of the foregoing recommendations tended not only to increase the health, comfort and efficiency of the troops in the field, but also to lighten the work of the Army Service Corps; while, the experience gained during the campaign has emphasised the necessity for most of the remainder.

I also submitted for consideration the following draft orders for a Transport Service, which I had prepared, some two years previously, at the request of the Deputy Assistant-Quartermaster-General at Headquarters. These draft orders are of some interest, as, on the arrival in South Africa of Lord Roberts and Lord Kitchener, the Regimental Transport Service was reorganised by them on very similar lines:—

"Draft Orders for a Transport Service in South Africa."

I. The senior executive transport officer, on each separate line of communication, will be responsible that the following books and returns are kept:—

- (a) A register of all animals received and issued (Army Book 293), in which a description of the animals will be entered, also the names of the individuals from whom they are received or purchased, and to whom they are issued. When an animal is struck off charge owing to death, sale, or other cause, the number and date of the authority will be quoted in the register opposite the animal's number, and the authority will be considered as the voucher for striking it off charge. This register will be closed on the breaking up of the force and will, with the vouchers, be forwarded to the War Office.

Horses and mules will, for purposes of identification, be branded with a broad arrow on the off-hip, and, if practicable, with a number on the near forehoof. If the number is above 999, the figures for the thousands will be branded on the off forehoof. Oxen will be similarly branded, but will have the numbers on the horns.

- (b) A register of all civilian employ  s engaged for Transport Service, giving the date of and authority for engagement, the rate of pay, and the date and cause of discharge. For drivers, leaders and herds the authority of the Army Service Corps officer on the spot will be sufficient; but, for civilian conductors and others, an order from superior authority will be required. For facility of reference each employ   will be given a number. Each person employed will be given a Last Pay Certificate Book (Army Book 41), on engagement, in which the above information will be entered on the cover and first page. In addition, any conspicuous mark or scar by which the individual may readily be identified, will be entered on the cover. As each individual is paid, the first page or the last pay certificate in the book will be torn out and attached to the Pay List (Army Form N 1535), and the next page filled in by the paying officer before the book is returned. Should the book be missing the employ   will not be paid without full enquiry and authority from the senior transport officer on the line of communications. The receipts of native drivers or leaders need not be obtained; a certificate by an officer, that they have been actually paid by him, will suffice.
- (c) A Field Equipment Ledger (Army Form 284), in which will be entered all vouchers for transport equipment received, issued, or struck off charge as final transactions. The company equipment ledger brought from England should be closed and sent to the Army Ordnance Department.
- (d) A register of hired wagons, in a manuscript book.
- (e) A register of government wagons and carts, in a manuscript book.

II. Executive transport officers will keep a General State Book (Army Book 293), in which will be entered all transport animals and equipment in their charge, the totals being altered from time to time as animals, vehicles, or equipment are received, issued or transferred.

III. In addition to the ordinary company returns, the following will be periodically rendered by executive transport officers :—

- (a) Pay Lists of civilian subordinates (Army Form N 1535), for the approval of the officer commanding

the transport company. Should the officer commanding this company be at a distance, these Pay Lists may be approved by transport officers and sent direct to the paymaster. Transport Officers will, however, report a detail of the bills so passed for payment to the officer commanding the company.

- (b) A Casualty Return (Army Form C 300), on the last day of each month, shewing all persons engaged during the month, and giving the information referred to in paragraph I (b).
- (c) A Return, in manuscript, on the first of each month of bills for transport services passed by them to the paymaster during the month.
- (d) A State of Personnel, for animals and equipment in their charge on the last day of the month, with the increase and decrease since the last return. The information to complete these states will be obtained from the General State Book (Army Book 293), referred to in paragraph II, or from the Section Squad Books. This return will be rendered by regimental transport officers through the divisional, brigade or station transport officer.
- (e) A Report, on each Monday, giving any information that may be considered of interest regarding the working of the transport in the locality, remarking especially upon the general efficiency of the transport animals and gear, and the quantity of transport animals, vehicles, and forage procurable in the surrounding district.

IV. Non-commissioned officers and men will take with them their great coats and the following articles packed in their kit-bags :—

I pair of boots	2 pair of woollen socks
I khaki suit	I clothes brush
I stable cap	2 towels
I tin of dubbin	I piece of soap
I holdall, complete	I flannel belt
I hair-brush and comb	I housewife
I mess tin	I oil can
I woollen shirt	I grease brush
I pair of drawers	
I blanket, sewn into a bag, to be strapped outside the kit-bag.	

NOTE.—No tents will be required, as both non-commissioned officers and men can sleep under the wagons.

The remainder of the kits will be packed in valises or waterproof bags and left at the base of operations. A ticket, with the owner's name and number on it, will be attached to each bag, so that it can be readily found, when required. A nominal list of men whose kits are left behind will be handed to the officer or non-commissioned officer left in charge at the base of operations.

V. Riding horses will be supplied for warrant and non-commissioned officers and for civilian conductors. Artificers will not necessarily be mounted.

VI. Government wagons will be formed into sections of twelve wagons each. A warrant officer or non-commissioned officer (with a private as bātmān) will be in charge of each section, with one or more non-commissioned officers to assist him. There will also be a civilian conductor and sub-conductor to each section. These latter should be good drivers and should understand the native language. Transport sections can thus, at any time, be divided into sub-sections of three, four, or six wagons, each under a non-commissioned officer or civilian conductor.

VII. The following will be the composition of a mule transport section :—

<i>Personnel.</i>	<i>Animals.</i>	<i>Vehicles & Equipment.</i>
1 warrant officer	4 riding horses	4 complete sets of saddlery
1 non-commissioned officer	144 mules	12 mule wagons, complete
1 private (as bātmān)		<i>With each wagon.</i>
1 civilian conductor		1 long whip
1 civilian sub-conductor		1 set of 12 mule harness, complete with chain
12 native drivers		12 head collar's, with rheims
12 native leaders		1 lifting jack
		1 3-legged cooking-pot, with handle and lid
		1 small barrico, for water
		1 drum of grease, for wheels
		1 spanner

Equipment.—Continued.

1 drag shoe, with chain	1 axe
2 needles	2 spare traces
½ lb. thread	6 spare rheims
} for re-pair of harness	a supply of raw sheep skins, for preventing galls

Spare Gear for Repairing Vehicles

(to be in charge of the warrant officer of each section).

2 diselbooms	1 collar-maker's palm
1 long wagon	2 whip thongs
1 wagon chain	12 collar-maker's needles
2 brake bars	4lbs. nails, of sizes
6 brake blocks	4lbs. screws, of sizes
1 set of felloes and spokes	1lb. beeswax
20 nuts and bolts, of sizes	6lbs. thread
12 whip handles	100 spare rheims
1 stock and set of bits	1 hammer, screw-wrench
1 screw-driver	

VIII. Every five sections will be placed under an Army Service Corps officer, who will be assisted by the necessary staff of subordinate officers, warrant and non-commissioned officers, rank and file, and artificers. The whole will form an auxiliary transport company.

IX. Similarly, hired wagons will be divided into sections of twelve wagons; but, as they will usually be accompanied by their owners or by their owners' representatives, a smaller supervising staff will be required than that with sections of government transport wagons. One non-commissioned officer to each section, with two officers to every five sections, would, in all probability, suffice.

X. While the transport is organised in sections of twelve wagons each and companies of five sections each, to facilitate supervision by, and to fix responsibility upon, the executive transport officers, it will be found impossible to keep these sections or companies together in their entirety; for instance, a wagon may break down and have to be left on the road for repair, a team or portion of a team may die or be lost and animals from another section may have to be substituted; again, two or three wagons may be separated from a section, and may not return to it for several weeks. The result will

be that vehicles from one section will constantly be mixed up with those of another section.

XI. In order, therefore, that there may be no difficulty in obtaining accurate states of the transport with each unit or force, and at each station or depot along the line of communications, the senior transport officer, serving either with the force or at a station on the line of communications, will render periodically to the staff officer administering transport duties a state of the transport present, as follows :—

STATE OF TRANSPORT { at } { Station
with } { Brigade
Unit

	ANIMALS.				VEHICLES.					Remarks
	Horses.		Mules.	Oxen.	Mule Wagons.	Ox Wagons.	Water Carts.	Ambulances.		
	Riding.	Draught.								
Total effectives ... ,, from previous state										
Increase { or Decrease { Difference to be ex- plained in column of Remarks.										

(Signature and Rank).....

(Date).....

To the Staff Officer administering Transport duties at

From these states, a return shewing the distribution of the whole of the transport employed along each line of communications, and including regimental transport, will be prepared and forwarded to headquarters by staff officers for transport duties, for the information of the general officer commanding at headquarters.

XII. An Army Service Corps warrant officer or non-commissioned officer will be detailed for duty with the transport attached to each unit; he will be under the orders of the regimental transport officer of the unit, where one has been appointed; otherwise, he will receive his orders from the officer commanding the unit. The duties of the regimental transport officer, or of the Army Service Corps warrant officer or non-commissioned officer, will be the general superintendence of the transport with the unit. He will be responsible that it is not overloaded or over-driven, that the animals and gear are kept in good condition, that the wagons start at the appointed time and are parked, when halted, in the allotted position. The regimental transport officer will check any ill-treatment of drivers or animals by the troops. He will allow no one but the drivers and leaders to ride on the wagons without permission from an officer. He will arrange that water-carts are kept filled, and that the water in the carts is not used on the march without an order from the officer commanding.

XIII. The Army Service Corps being responsible for the general efficiency of all transport, regimental transport officers will report to the senior executive transport officer on the spot, if necessary through the officer commanding the unit, whenever any of the vehicles, animals or harness are found to be inefficient.

XIV. To avoid delay, routine reports, returns and requisitions, which may be required by officers commanding Army Service Corps companies, will be furnished by regimental transport officers direct. On the other hand, officers commanding Army Service Corps companies will constantly inspect the transport attached to units, and bring to the notice of regimental transport officers and of commanding officers, when necessary, any instance of improper loading or driving that may come under their observation.

XV. Care should be taken that regimental transport wagons are packed so that a squadron or wing can be detached at once, each with its due proportion of ammunition, baggage, equipment, rations and stores.

XVI. The rations of drivers and leaders employed with regimental transport will be drawn regimentally.

XVII. Each hired wagon will receive a number in the register of hired wagons—*see* paragraph I (*d*)—and the date of employment, rate of hire, and name of owner or contractor

hiring the wagon to government, the period for which engaged, the details of agreement, and any other necessary information will be entered against the number in the register.

XVIII. Mule and ox wagons will be registered on separate pages of the register and under different numbers. The numbers should be legibly marked on the near side of each wagon when engaged.

XIX. Officers, warrant, and non-commissioned officers in charge of sections of hired wagons will keep a list of the numbers of wagons, the name of the hirer or owner, the date of employment, and the rate of hire, in their section squad books: also, any information relative to the efficiency of the wagons which may be required when payment for their hire is being made.

XX. Wagons, carts, and other vehicles, drawn from the Army Ordnance Department or purchased direct, will be entered in a manuscript book—*see* paragraph I (e)—and will be numbered in succession. Mule wagons, ox wagons, ambulances, water-carts, Scotch and other carts will be registered on separate pages and under different sets of numbers. The section or unit to which the several vehicles have been allotted will be entered in this register against the number of the vehicle, in order that the latter may be readily traced.

XXI. When transport animals die from ordinary causes or are killed by the enemy, they will be struck off charge on an officer's certificate—a veterinary officer's, when practicable. This certificate will be forwarded to the senior executive transport officer as a voucher for the register of animals.

XXII. Boards will, if practicable, be held on animals and equipment lost, captured or destroyed, and the proceedings sent to the staff officer administering transport duties, in order that, when necessary, the approval of the general officer commanding may be obtained. The register numbers of the animals should be quoted in the proceedings of the board.

XXIII. A small quantity of material for repair will be carried with each section of transport. Should hired wagons require repair and no local smith be available, Army Service Corps artificers may be employed to repair the wagons, the owner paying a fair price for the materials supplied and work executed.

The value of the material will be paid to the field paymaster, whose receipt will be the authority for striking

it off charge, and the rest of the money will be divided amongst the military artificers employed. It should not exceed 2s. 6d. (two shillings and sixpence) per man for a day's work. Civilian artificers will, however, receive no additional remuneration for repairs, etc., to hired vehicles or harness.

XXIV. Hired transport will be engaged in two ways : by the day to accompany the troops, and by weight or by the trip-load when troops, stores, or supplies are required to be sent from one station to another. The bills will be prepared in the office of the senior executive transport officer, and a certificate will be attached to each bill to the effect that the wagons were effective during the period for which hire is claimed.

Wagons hired by the trip will be paid for on production of a way-bill for the supplies or stores receipted by the consignee. In case any supplies or stores are deficient, their value will be deducted from the hire due to the wagon owner.

XXV. Native employes will be punished by fines, which should not exceed One Pound (£1) for each offence, except in the case of absence, when two days' pay may be stopped for each day's absence, without leave. When fines are inflicted, they should at once be entered across the last pay certificate in the man's Last Pay Certificate book, with the signature of the officer awarding the punishment as an endorsement ; and, once a month or oftener, a list of the fines inflicted and the numbers and names of the men fined will be forwarded to the senior executive transport officer. Cases requiring more severe punishment will be reported to the local commanding officer, or to the senior executive Army Service Corps officer, as circumstances may require.

No punishment will, under any circumstances, be awarded by a warrant or non-commissioned officer.

Officers and others performing transport duties will keep themselves acquainted with all orders regarding the supply service, as they may at any time be called upon to take charge of supply duties.

At Southampton, I received by post the following instructions :—

“ COLONEL RICHARDSON,

1. “ In accordance with the desire of General Sir Redvers Buller, the Commander-in-Chief has approved of your having both administrative and executive control over all Army Service Corps services in Natal for the present, but should

General Sir Redvers Buller assume chief command in South Africa the area of your control over Army Service Corps services would be defined by him.

2. "The Natal command having been separated from that of Cape Colony, you will not be able to move any Army Service Corps personnel from Cape Colony to Natal unless Lieut.-General Sir F. Forestier-Walker concurs with General Sir George White that he can spare them. From the list of officers you will see that the Army Service Corps services in Cape Colony are somewhat undermanned already.

3. "The Army Service Corps officers detailed for Natal having been selected before Sir Redvers Buller's minute was received, do not correspond as regards your regimental staff with his wishes, but as you will have a perfectly free hand in distributing the duties of all the Army Service Corps officers in Natal, you can adjust your staff as you think fit. Should more Army Service Corps officers be sent out shortly, an endeavour will be made to meet Sir Redvers Buller's expressed wishes in all details.

4 "It is suggested that, until a larger force is sent out, Major O'Dell should remain in the position of officer commanding Army Service Corps in Natal.

"The personnel going out, being chiefly of non-commissioned grades to supervise the native establishments, will give little trouble as regards the arrangements of their interior economy and documents. A proper staff for this duty will be sent out later, if needed.

5. "Colonel Stevenson, senior remount officer in South Africa, will be asked to form a remount depot for transport animals in Natal, with the officers and non-commissioned officers already there, and an increase to the remount establishment has been recommended to be sent out immediately.

"By desire of Sir Redvers Buller, your own destination has been changed from Cape Town to Natal.

"(Signed) A. G. RAPER,

"for Q. M. G.

"*War Office.*

"16th September, 1899."

Before leaving Southampton I wrote to Sir Redvers Buller that I had ascertained it was not intended to send out the Army Service Corps establishments until the divisions and brigades, to which those establishments had been posted,

embarked. I pointed out that, if this was persisted in, the supply and transport service would be heavily handicapped. I begged Sir Redvers to ask the Secretary of State for War to sanction the despatch of the Army Service Corps personnel at the earliest possible date, and thus to ensure timely arrangements being made in South Africa for the reception of the Army as it disembarked.

On Sir Redvers Buller's representations, the Army Service Corps staff and companies were embarked some weeks before the troops to whom they were to be attached, and to this cause was mainly due the satisfactory working of the Army Service Corps services during the war.

On the 3rd October, I reached Cape Town where I found telegraphic orders awaiting me to disembark at that port and await Sir Redvers Buller's arrival.

While in South Africa I kept a diary, extracts from which I used to send home periodically to the Assistant Quarter-master-General, Army Service Corps, who had requested me to keep him informed of our requirements.

This diary, from which I quote freely in these pages, was not written with any idea of future publication and was quite unofficial. My views on passing events are consequently expressed with far greater freedom than would have been possible in an official correspondence.

CHAPTER II.

Situation in South Africa on the Eve of the War.

The situation in South Africa with regard to the supply of foodstuffs immediately previous to the outbreak of hostilities was briefly as follows :—

Owing to the uncertainty of the political aspect, merchants at Cape ports had, for some time past, been letting their stocks run down, while at the same time they had ceased to place orders abroad to replenish their depleted reserves.

On the other hand, agents of the governments of the Transvaal and Orange Free State had been making large purchases of the foodstuffs procurable in the Cape Colony and Natal.

In addition, large numbers of Uitlanders, with their wives and families, began to pour into Natal and the Cape Colony, and to consume the already diminished stocks at the coast ports.

The War Office had sent out a certain reserve of supplies for the small Imperial force in South Africa, but barely two months' food and forage for the troops then serving in Natal and the Cape Colony had reached the country before October, 1899.

Early in September, a month's provisions, medical comforts and forage for an additional force of 50,000 troops, 12,000 horses and 15,000 mules had been ordered for shipment to South African ports; and, during the last week in September, a second month's supply for the same force was arranged for : but, on the 12th October, probably before any of these supplies could have been shipped, war was declared.

Steps were immediately taken to augment the limited reserves at the depots which had already been formed in the Cape Colony, at De Aar, Naauwpoort, Stormberg, at the Orange River Station, also at Kimberley and Mafeking, where small military garrisons had been established ; but railway communication was interrupted by the enemy before any additional supplies could be sent north of the Orange River.

In Natal, every effort was being made to forward supplies to the main depot at Ladysmith, and to the advanced posts near Dundee.

On the 11th October supplies were distributed as follows :—

CAPE COLONY.

STATION.	GARRISON.	NUMBERS FED		SUPPLIES available in Army Service Corps Depots.	REMARKS.
		Men—including Civil and Native employees.	Horses and Mules.		
MAFEKING.	— Protectorate Regt.; Volunteers; Dets. Army Service Corps and Royal Army Medical Corps.	500	250	About 40 days' tinned provisions and forage for the Garrison.	In addition, a contractor had collected some 400,000 rations of provisions, and considerable supplies of forage.
KIMBERLEY.	— 13th Coy. R.G.A. (6 guns); Det. 7th Coy. R.E.; ½ Batt. Loyal N. Lancashire Regt.; Diamond Field Artillery; Kimberley Regt.; Dets. Army Service Corps and Royal Army Medical Corps.	1200	250	About 40 days' tinned provisions and forage for the Garrison.	Contracts for supplying the troops from day to day had been entered into, and efforts were being made to increase the reserve of tinned provisions and forage, as it was feared that if (as soon afterwards happened) railway communication with the South was interrupted, the task of subsisting the large civil and native population would devolve upon the Military authorities.
ORANGE RIVER RAILWAY STATION.	— Det. 14th Coy. R.G.A.; Hd.-Qrs. 7th Coy. R.E.; ½ Batt. and M.I. Coy. Loyal N. Lancashire Regt.; ½ Batt. Yorkshire Light Infy.; Dets. Army Service Corps and Royal Army Medical Corps.	600	250	About 30 days' tinned rations and forage for the Garrison.	Local contracts had been entered into to meet daily requirements of bread, fresh meat and vegetables.
DE AAR.	— 2 Sections R.E.; ½ Batt. Yorkshire Lt. Infy.; Dets. Army Service Corps and Royal Army Medical Corps.	450	120	80 days' tinned rations and forage for the Garrison.	Do. do.

CAPE COLONY.—*Continued.*

STATION.	GARRISON.	NUMBERS FED		SUPPLIES available in Army Service Corps Depots.	REMARKS.
		Men—including Civil and Native employees.	Horses and Mules.		
NAAUWPOORT.—Dt. R.G.A.	1 Section R.E.; $\frac{1}{2}$ Batt. Royal Berkshire Regt. and M.I. Coy. York- shire Lt. Infy.; Dets. Army Service Corps and Royal Army Med- ical Corps.	650	300	80 days' tin- ned rations and forage for the Gar- rison.	Local contracts had been entered into to meet daily require- ments of bread, fresh meat and vegetables.
STORMBERG. — Det. R.G.A.; 1 Section R.E.;	$\frac{1}{2}$ Batt. and M.I. Coy. Royal Berkshire Rgt.;	650	300	60 days' tin- ned rations and forage for the Gar- rison.	Do. do.
	Dets. Army Service Corps and Royal Army Medical Corps.				

RHODESIA.

No details of the exact strength of Colonel Plumer's force were to hand, but it was understood that a good three months' supplies for all Europeans were available at Buluwayo, while additional supplies could always be imported, *via* Beira.

NATAL.

About sixty days' supplies had been collected in the various depots for the Natal garrison, which was being reinforced almost daily by the advent of additional troops hurriedly despatched from stations at home and abroad.

The greater portion of these troops were concentrated at or near Ladysmith, from which station supplies for the brigade encamped in the vicinity of the coalfields at Dundee were distributed under arrangements made by Colonel Ward.

By the 11th October, nearly three months' supplies for the troops at and north of Ladysmith had been collected at that station.

As regards transport, each unit was on its arrival in South Africa provided with a complete regimental (mule) transport, according to a scale prepared at the War Office. In addition, contracts had been entered into for the hire of some

800 ox wagons, with teams and drivers, in the Cape Colony. These were being concentrated south of the Orange River, in convenient localities for grazing. In Natal, also, a number of ox wagons were being hired and purchased to supplement the regimental mule transport, and to equip the supply and ammunition columns.

Extracts from Diary.—"Cape Town, 13th October, 1899. I landed a week ago, and on the following day accompanied Sir F. Forestier-Walker on a tour of inspection of the posts formed south of the Free State border, and have just returned after five days in the train."

"We are anxious to collect three months' supplies for 12,000 men and 5,000 animals, at each of the following stations:—De Aar Junction, Naauwpoort, and Stormberg; but, owing to defence considerations, it is not advisable to accumulate any very large reserve of stores or supplies at either Naauwpoort or Stormberg at present."

"As the Boer ultimatum gives us until 5 p.m. to-day to clear out of the country, we shall be in a state of war to-morrow morning, when the situation will at any rate be clearer. Meantime, all troops proceeding up country are supplied as far as possible with two months' supplies."

"At present, there are one half-battalion infantry at Kimberley, two half-battalions at the Orange River, one half-battalion at De Aar, one half-battalion at Naauwpoort, and one half-battalion at Stormberg, with a few guns and mounted infantry at each place. The 9th Lancers will proceed to De Aar immediately they land, probably the day after to-morrow, and a Brigade Division Royal Artillery to the same place as soon as it arrives."

"I formed the impression that De Aar and Naauwpoort were safe from raids, but that Stormberg would be a difficult position to defend with a half-battalion. As soon as more troops arrive they will be hurried up, and we can then begin filling up the stations with supplies and stores. So far, we cannot get the railway to send off much more than 100 tons a day, which means that it will take about two months to get up stores and supplies for the force I have mentioned to De Aar alone."

"NOTE.—Now that the civilian traffic has stopped we are doing better than this.—(18/10/99)."

"I have begged the General to ask the High Commissioner to put in force the local Burgher Act, under which, I understand, we can requisition supplies and transport, and I hope this will be done, the military authorities paying for the supplies

requisitioned at prices fixed by the civil authorities on the spot. This would be a great assistance, as everything is being run up to war prices, and meat went from 9d. to 1/- a pound in De Aar in one day."

"The books and stationery ordered to be put on board ship never reached me, though I received the keys of a despatch-box from the Stationery Department. I badly want a box or two filled with regulations, stationery and forms, as I can get none here; in fact, there is hardly any office stationery in Cape Town—even envelopes are getting scarce. Some dozen boxes only have arrived, so Colonel Bridge tells me, during the last two months, and these have nearly all been used up. Several dozen boxes for departments and headquarters of lines of communication are urgently required, as we shall have three distinct lines of communication in the Cape Colony, besides one in Natal."

"The copying-machine and typewriter, which I found in the hold of the 'Tantallon Castle' after we had been at sea ten days, are very useful."

"I notice the sail-covers supplied by the Army Ordnance Department are almost useless; they have no eyelet holes or grummets to which ropes can be attached to secure them, and they are not waterproof. I trust that a number of the best and largest sail-covers may be sent out as soon as possible to Natal and Cape Town. They should be thoroughly waterproof. Green sail-cloths are, I fancy, the best; they use them here on the railway trucks. Tarpaulins are not to be recommended as they crack with the heat. The Army Ordnance Department is being urged to buy up all sail-cloths that can be obtained locally."

"We were obliged to detain here part of the Army Service Corps Establishment, ex 'Gaul' and 'Tantallon Castle.'"

"I suppose scales of rations and transport tables will be sent out from the War Office when the troops arrive. The local scale differs somewhat from the lists given me, but I presume official instructions on the subject will be issued. The authorities here have received no copies of the South African Mobilisation Instructions, or of the distribution of the troops forming the Army Corps, which were circulated in districts at home."

"I assume it will be settled at home which divisions disembark at East London, and which at Port Elizabeth and Cape Town; if we are not told this we may be sending Army Service Corps companies and other administrative establishments to the wrong places."

"NOTE.—This information was received by cable to-day.—(18/10/99)."

"At present I have no staff, as I have only been inspecting, and I thought it better to hand-over every officer and non-commissioned officer of the Army Service Corps to Colonel Bridge to distribute along the lines of communication. Army Service Corps officers have been sent to Port Elizabeth, East London, Stormberg, Naauwpoort and De Aar."

"I hope the War Office are not under any misapprehension about the Cape railways. So far as I have been able to ascertain, it will require two trains to take each cavalry squadron, and three if horsed with large English horses. Two trains will be required for each half-battalion of infantry. I doubt if a troop train could be got away each hour. When we were travelling in the express we were often two or three hours late at several of the stations *en route*, and we reached Cape Town on our return two and a half hours late. I think the Intelligence books are somewhat too sanguine as to the capabilities of the railway for conveying large bodies of troops in a very short time. As the difficulties of moving troops by rail must increase with the distance traversed, it might be advisable to land a good many cavalry and Royal Artillery at East London, where the distance to the Free State border is less than one-half the distance from Cape Town."

"NOTE.—Since writing this, I have seen the railway people, who say that the line from Cape Town is the best, although longer, on account of steep gradients on the other lines. I meet them with Colonel Bridge to-morrow to discuss whether more plant could be used if sent out.—(18/10/99)."

"I hope to obtain the loan of from fifty to one hundred large and well-oiled sail-cloths from the railway administration."

"As nothing but coal and cow-dung is available for fuel up country, I am having ovens built by the Royal Engineers at De Aar, Naauwpoort and Stormberg, in order that coal may be utilised. I have also arranged for the troops to use coal in their field-kitchens. They will grumble at first, though they will eventually like coal better than wood, as it goes much further. Last year, in the western district, all the troops under canvas used coal and, with very few exceptions, preferred it to wood."

"As I anticipated, the division of commands in Natal and the Cape Colony is already having an effect on financial arrangements. We heard yesterday that Natal is bidding for horses in the Queenstown District against our contractor. Consequently, we are bidding against ourselves and prices may rise to any extent. A telegram has been sent to the General in Natal, and I wrote a week ago to Colonel Ward on the subject, begging him to consult us before buying any animals or supplies in the Cape Colony."

"As soon as the Army Service Corps companies arrive I will increase Colonel Ward's establishment, but as the Natal force is concentrated between Durban and Ladysmith—about 150 miles—he will want a smaller establishment than is required in the Cape Colony, with the nearest post (De Aar) 540 miles away from Cape Town."

"Horses are coming in very slowly. An Impressment Act would enable us to obtain any number, also forage, cattle, sheep, etc. It will save the Home Government millions if such an Act is promulgated. I believe the Burgher Act includes the impressment of carriages, food and forage, but I daresay the civil authorities fear that the Boer farmers, who are naturally not very friendly with us while we are at war with their countrymen in the Transvaal, might become actively hostile if we impressed their property, though I really do not see what hardship there could be if we paid a fair price, to be fixed by the resident magistrate or other civil authority."

"As regards kit, I notice all troops up country only have a jersey, khaki jacket and trousers, also cloth trousers. This is the local order, and no instructions changing it have been received from home. The result is that, in a country where the ice is half-an-inch thick on the water in one's tent in the morning, men are wearing a pair of serge trousers and a khaki frock, with perhaps a jersey underneath. They seem quite fit, but I fear that in wet weather they may get chills and fever with nothing to wear but cotton frocks."

"To-day, 12th October, we have been able to load 180 tons of stores for De Aar and Orange River Terminus, but this will have to be largely increased if we are to fill our depots with three months' supplies."

"I wonder why the War Office ordered so many two-wheeled carts for the regimental transport establishments. My experience is that two-wheeled carts in this country are always heavy, cumbersome, difficult to load, carry but small loads, require a driver and leader apiece, and do not afford the latter shelter at night. The worst mules and oxen with a South African force are invariably those driven in two-wheeled Scotch and water-carts."

"The Army Service Corps stationery and the Supply Depot equipment, advised two mails ago, have not yet arrived. We have, therefore, to buy, locally, bad and cumbrous stuff at enormous prices."

"After seeing the class of mule purchased here, I am quite certain a wagon and ten mules will not be able to carry more than 2,500 to 3,000 lbs., so we must either reduce our loads of ammunition and food when near the railway or increase the regimental transport, which last alternative is virtually impracticable. I am sorry ox transport was not adopted for

infantry regimental transport, instead of so much mule transport."

"In Natal, they are buying oxen and wagons. This is, I think, a mistake, and I have written to Colonel Ward not to buy any more if he can help it, but to hire."

"Mule drivers are getting scarce, but we must do our best with the material available."

"I am sorry to hear the Royal Artillery are bringing out forge-wagons and ammunition and store wagons. These cannot keep up with a battery along a South African road in wet weather. Every general service vehicle possible should be left behind and ox wagons used, as in former expeditions."

"Very liberal supplies of stationery, forms, etc., should be sent to Cape Town, East London, and Port Elizabeth, and no staff or departmental officer should be allowed to embark without having with him sufficient stationery and forms to last him for at least a month. This plan was pursued at the manœuvres last year, and proved most successful. Here, we are sending off staff officers and commandants of bases and posts along the lines of communications without even foolscap to write upon, as the Ordnance have none. Each officer should also have the best map of the locality to which he is to go."

"I am somewhat nervous about the Army Ordnance Department, and think they want stiffening, with a man like Colonel O'Callaghan, Royal Artillery, who was at Salisbury manœuvres last year. The difficulty in obtaining sail-cloths, when we have hardly commenced forming depots, leads me to think that this department may be unequal to the heavy strain put upon it when the Army Corps arrives."

"Troops and horses for Natal are being sent in the same vessels with stores for Cape Town. Take, for example, the 'Johannesburg,' with 100 artillery horses for Natal, well over twenty days out. When she arrives she must go first to Simons Bay to whip out 500 tons of naval stores—a very slow operation—then crawl down the coast, stopping at every intervening port, eventually reaching Natal and disembarking the horses after a good five weeks' trip, the latter part near a coast famed for its storms. The vessel will then return to Cape Town to disembark her stores, of which we have no details, and we are very likely buying locally the very stores she has on board."

"NOTE.—We have arranged with the Navy for this ship to be sent direct to Natal, but, I understand, we shall have to pay £800 compensation for doing so.—(18/10/99)."

"Up to the present, I have satisfied myself that in hardly a single instance have we been able to identify shipments by

previous documents. The chaos which must result if such a state of things continues may be well imagined. In the case of the ' Johannesburg ' we might have had all the information we required by the mail which left some days subsequently. Why is not a supercargo put on board each vessel, with lists of stores and supplies ? He could copy these *en route*, and hand the copies over, on arrival, to each department concerned."

CHAPTER III.

The Supply and Transport Arrangements at the
Commencement of the War.

Extracts from Diary :—" Cape Town, 18th October, 1899. Mafeking, Vryburg, and Kimberley are now *en l'air*, and we are therefore unable to send them supplies, as the rail is cut and communications are entirely interrupted."

" Weil, a contractor, assures me he has at Mafeking over 400,000 army rations, worth £80,000, which he will no doubt sell to Colonel Baden-Powell at a considerable profit to himself. This post, therefore, seems safe as regards foodstuffs for many months, and there is plenty of water available so far as my recollection of the place goes."

" As regards Kimberley, there were about three months' supplies available for the troops (regulars) when the line was cut, but as irregular troops were being raised, the reserve of army rations for the increased force would become proportionately reduced. The only answer I could get from Colonel Kekewich, before the wire was cut, was that he had 1,000 days' supplies for the garrison, and six to nine weeks' for the civil population. Probably, the 1,000 days is a mistake, while the six to nine weeks is somewhat vague ; and, should the civil population run short of food, we shall receive frantic appeals for relief."

" At the Orange River Station, to which place the bulk of the troops in the Cape Colony have been sent, three months' Woolwich supplies for 2,200 men are now on the spot or in trains on the way there."

" We have cleared out all the Woolwich supplies in Cape Town, and sent them to De Aar and Orange River Station. Colonel Bridge is buying largely locally in order that we may utilise the railway to the fullest extent whilst we are able."

" At present De Aar is the only station we can safely use as an advanced depot till more troops arrive, so we only keep a three months' supply for the actual garrisons at Stormberg and Naauwpoort."

" It seems of great importance, from a military as well as a finance point of view, that we should not be in a worse position than the enemy, and should be able to requisition supplies, transport, etc., at fair rates ; instead of having to pay double

and treble the proper price for everything, as at present, and even then finding it extremely difficult to obtain the supplies, horses and transport, we require."

"Everything with reference to supply and transport has so far been working smoothly. From Natal I have only heard by telegram."

"With the General's approval, we propose to distribute the 700 ox wagons hired from Weil as follows:—200 within one or two days of De Aar; 300, say, fifty miles south of Naauwpoort; 200 at Queenstown, all by 20th November next."

"We shall no doubt have to utilise some of these ox wagons as regimental transport. I am a great believer in ox as opposed to mule transport for military service in this country, so I do not think this will matter."

"We have asked the War Office that three months' (say, 100 days') reserve supplies for all troops sent to South Africa may be shipped to Natal and the Cape Colony. We ought to manage with this reserve, at any rate for the present, if we use local produce as well; but if we have to send large bodies of troops to advanced posts like the Orange River Station, communications with which may possibly be interrupted, I do not think it will be safe to keep less than 100 days' hard rations with them, and if we have to do this at two or three posts our reserves will not last long."

"I badly want really good maps of the Cape Colony, Natal, Free State and Transvaal. If maps were printed on linen or calico they would be much better than on paper, which soon tears and turns to pulp in the rain. Every officer in the force should have the best map obtainable in the smallest possible compass."

"Cape Town, 19th October, 1899. We have used all the Woolwich supplies, landed at Cape Town up to date, in filling up places like De Aar and the Orange River Station with three months' supplies for their garrisons, in case they may be *en l'air* for a time, like Kimberley. Preserved meat, however, is not procurable in any quantity and, although we do not issue it unless we are forced to, still, when a camp is invested, no large number of live cattle can be foraged and kept in the vicinity without great risk of capture, so we have to keep preserved meat as a reserve. Thus, the Orange River Station wants 100 tons alone, for 2,200 men for 100 days. We have to pay as much as 10½d. a lb. for preserved meat, and we wired to the War Office yesterday asking that the shipment of the three months' reserves for the Army Corps might be hastened."

"I trust that mule harness will arrive before the troops. We can get none here, and if it does not arrive we shall have

troops, mules and wagons, but shall be unable to move. It is a pity mule harness was not ordered to be made at home months ago when the mules were ordered, as anyone who has ever been to South Africa knows that the little local stuff obtainable is most of it useless, besides being double the cost of that made at home."

"All Army Service Corps details in the 'Kinfauns Castle,' which arrived yesterday, have been sent to the destinations for which they were designated at the War Office, except that we have retained a dozen butchers and bakers and given Natal a dozen clerks in exchange. We wanted the former badly for De Aar and the Orange River Station."

"Finding that the High Commissioner had ordered the local volunteers to mobilise on the understanding that they were to be paid and rationed by the Imperial Authorities, I begged the General to wire home for instructions, which was done on the 17th inst. If we once pay 5/- a day and 2/6 for rations to volunteers, who are to live at their homes in Cape Town, Port Elizabeth and East London, the Home Government will soon be paying and rationing the entire male population of the Colony at the same rates, for you can hardly call out burghers in the country districts and pay them differently to the volunteers at Cape Town; and, if the War Office once agrees to pay, feed and equip them, with no guarantee of repayment, the cost of this war, before it is over, will be more like fifty millions than ten millions."

"NOTE.—Telegraphic instructions have been received from the War Office to pay English rates of pay, and I have reduced the ration allowance to 1/3 per man, and 2/6 per horse. The High Commissioner, however, has not agreed, and has wired to the Colonial Office on the subject, so we shall soon hear definitely what is to be done."

"Everyone, here, wants the highest rates. The railway charge us 7d. a truck, per mile, for both troops and stores. This means a good sum on a train of twenty trucks to the Orange River Station some 600 miles away. I estimate the Army Corps will take 300 trains, without counting stores, so that our railway bill, which is to be settled monthly, will be enormous. I am getting a report of what was arranged before I came out, and will ask the General to wire home for instructions, after consulting the High Commissioner."

"For the use of docks, wharves, and storehouses the Harbour Boards are also charging us very handsome rates. We want power to 'commandeer' what we require; but, as His Excellency will not allow this to be done, we pay through the nose for everything, and when once you have fixed a high price it is very difficult to reduce it afterwards."

"I have suggested that all balances to the credit of any administrative department of the Transvaal or Free State Governments, which may be in any of the local banks in the Cape Colony, should be seized and paid into the military chest ; also, that the Navy should make a very close inspection of every ship's manifest."

"We have seized fifty cases of saddlery consigned to the Transvaal, and have handed them over to the Army Ordnance Department for issue to the troops."

"Hearing that some 200 sacks of meal, consigned to the Transvaal, had been stopped at De Aar, I asked Bridge to wire to the Commandant to seize it. This has been done."

"The Boers have cut off the water supply from Kimberley. This will make the people there cry out, but plenty of good water can be obtained from wells."

"I am making a contract for 4,000,000lb. of meat at 11d. per lb., to be delivered to troops on the march, by the contractor, wherever we want it. The price is high, but the firm is a strong one and not likely to fail us. War Office authority has been cabled for before acceptance."

"I have drafted memoranda as to making foodstuffs, etc., contraband of war ; also as to the rates we are paying the railway administration, in order that the General may lay them before the High Commissioner. Colonel Bridge and I had an innings with the railway administration this morning (20th October) and we shall, I think, be able to move the whole Army Corps to the front in three weeks, excepting the mules and wagons, which we hope to concentrate up country before the troops arrive, though the want of harness and even wagons and mules may make this a serious problem. We are sending 500 mules to-day to Queenstown as a beginning, but this is a mere drop in the ocean. To-day, 20th, we are sending off a small Naval Brigade to Stormberg. If we only had two or three more battalions, the General would let me go on filling up the Naauwpoort and Stormberg depots, even though I had to purchase locally. As it is, I am losing valuable time, but we cannot run any risks."

"We hope to get 100 mule wagons with harness to De Aar by the time Sir Redvers arrives, so that if he wants to make a demonstration over the border with the force at Orange River Station, and thus relieve the pressure on Kimberley, he may be able to do so, but, as I have already noticed, the Army Ordnance Department have not got the harness, or even the wagons."

"I do not understand why we should be buying a bad class of wagon here, of more or less unseasoned wood, when we could have got excellent wagons from America, many hundred-weights lighter and much cheaper. We used hundreds of

them in Zululand and the Transvaal, twenty years ago, so why should we not have them now ? ”

“ I believe the native mule-driver question, which has been agitating our minds, has now settled itself satisfactorily, and I would postpone sending out Army Service Corps drivers, or as many of them as have not left, as they will make poor figures at driving a span of mules, and be more or less helpless at herding and inspanning either mules or oxen.”

“ Yesterday, I received my long-lost despatch-box ; it was found in the Custom House, and had, I believe, come back in the ‘ Tantalion Castle ’ from Natal. On opening it I found it empty, so that whichever office deals with stationery did not send me the books and regulations I was promised. Perhaps, being entirely without regulations is not altogether a bad thing : anyhow, there are none to be obtained at Cape Town.”

“ Owing to the influx of Uitlanders, South Africa is no longer self-supporting. Supplies of every kind, including meat, flour and meal, are imported largely. The advent of a large force at once puts up prices to famine rates, and as we have no power to impress or ‘ commandeering,’ we may find ourselves in a corner unless the War Office send us out supplies before the troops arrive. While troops are going up country, supply trains must be stopped and, as it will take three weeks for the railway to carry the Army Corps up, we ought, I think, to have two, if not three, months’ supplies ready at our advanced depots by the time the troops arrive. If we could only move our depots forward to the Orange River we should be in a better position than we are now, as once we cross the border we may get forage, grain and meat, by requisition. At present, I am only allowed to fill up De Aar.”

“ The relief of Kimberley is the great cry of the civil element. Besides some 25,000 men, women and children, there are over 15,000 natives in the place. There seem to be ample supplies of everything except, perhaps, live cattle, fresh milk and vegetables.”

“ From Colonel Ward, in Natal, I hear satisfactory accounts. I arranged with him that three months’ supplies of everything were to be collected at any station in Natal to which troops might be sent.”

“ I have received a tender from Weil for the supply of meat, at 10d. He is, to my mind, not likely to be so good a contractor as the South African Supply and Cold Storage Co., which has a virtual monopoly of the meat supply here. Though I felt bound to ask the General to cable home the details of Weil’s tender, I think the difference of price a mere nothing compared to our feeling of security if we have the Cold Storage Company—with Combrinck, Graaf and Sivewright, as directors—for our contractors.”

"Cape Town, 30th October, 1899. The 'Braemar Castle,' with Army Service Corps companies on board, arrived on the 26th inst. We received no detail of the officers, or of the distribution of the companies, until the morning of the day the ship arrived; consequently, we had some difficulty in distributing so many officers and men."

"I have sent No. 6 Company on to Natal. Colonel Ward wired he wanted four more transport companies and twenty-one officers. I have sent him one company and fifteen officers, which is a good slice of his demands. I did not venture to send more, until Sir Redvers arrives, as companies are all marked off to the Army Corps, except the 'line of communication' companies which are employed as remount companies."

"I am keeping the staff officers and Army Service Corps companies at the base until mules arrive, in order that they may organise the transport (regimental and Army Service Corps) of the Divisions, Brigades, etc., to which they have been posted; the staff officers to supervise this, and to meet their Generals with full information on supply and transport matters."

"The following memorandum on the working of the Cape Government railways for military purposes has been drawn up by the General Manager, Mr. C. B. Elliott:—

' 1. (i) The number of engines on the Cape railways are 457 :

(a) 75 are capable of hauling a gross load of 210 colonial tons up the steepest gradients, *i.e.*, 1 in 40.

(b) 64 will haul 180 tons.

(c) 32 engines will haul 160 tons, and

(d) 130 engines will haul from 100 to 120 tons up the same gradient.

The remaining engines are used as follows :

(e) 36 for shunting.

(f) 11 tank engines for suburban traffic.

From the foregoing must be deducted the following engines, which are not available for present use (*viz.*, on 24/10/99), owing to the line of communication being broken by the enemy, *viz.*:
(b) 29; (c) 2; (d) 14; (e) 1.

- (ii) The number of carriages and trucks are as follows :—

Carriages, 503 ; carriage and van, 96 ; bogie trucks, 1,671 ; short cattle trucks, 1,144 ; short trucks, various, 4,128 ; less, say, one-third north of the Orange River.

- (iii) For the purposes of this calculation it has been assumed that the average number of short vehicles which can be hauled on one train is 25, including the brake-van, and that the average speed of through trains would be as follows :

Cape Town to De Aar : miles per hour, including stoppages for meals, etc.	15
Port Elizabeth to Naauwpoort : miles per hour, including stoppages for meals, etc... ..	10
East London to Stormberg : miles per hour, including stoppages for meals, etc... ..	9

	Mileage.	Journey occupying about.
Cape Town to De Aar ..	500	33 hours.
Port Elizabeth to Naauwpoort ..	270	27 „
East London to Stormberg ..	221	25 „

- (iv) As regards engine power, the number of trains which could be run during the 24 hours, would be as follows :

Western system—Cape Town to De Aar ..	7
Midland „ Port Elizabeth to Naauwpoort ..	8
Eastern „ East London to Stormberg ..	8

It might be possible to run one or two additional trains occasionally on each of the systems enumerated above.

2. The following would probably be the composition of the trains :

- (i) One regiment of Cavalry—strength, 523 officers, men, and natives ; 469 horses ; 1 machine gun, and 4 carts and baggage. Six trains of 22 short vehicles each.
- (ii) One battery of Field Artillery—strength, 179 officers, men, and natives ; 159 horses and mules ; 6 guns and ammunition wagons ; 8 wagons and baggage. Three trains of 32 short vehicles each.

- (iii) One battalion of Infantry—strength, 1,033 officers and men, 7 horses, 1 machine gun, 7 carts, and baggage. Three trains of 25 short vehicles each, on the Western system, and 4 trains of 19 short vehicles each, on the Midland and Eastern systems.
- (iv) One Field Company Royal Engineers, say, the same as for the Field Artillery.

It will be noticed that in the above calculations most of the transport animals and vehicles have been omitted from the numbers to be carried in the troop trains. Endeavours will be made to assemble this transport at the advanced posts before the arrival of the troops.'

'3. The following gives the information in a tabular form :

				Time Trains. of dispatch
I Regiment of Cavalry	..	..6	..	7 hours
I Battery of Field Artillery	..	..3	..	4 "
I Field Company Royal Engineers	..	..3	..	4 "
I Battalion of Infantry, Western	..	..3	..	4 "
Do.	do.	Midland	..4	.. 4 "
Do.	do.	Eastern	..4	.. 4 "

Thus, the minimum time, in which the railway department could despatch 6 trains from any one port, is 7 hours.'

'4. Calculating on the above basis, and adding 10% for contingencies, it is estimated that one Infantry Division from Port Elizabeth to Naauwpoort; a second from East London to Stormberg; and a third Infantry Division, together with the Army Corps details and Cavalry Division, from Cape Town to De Aar, could be conveyed to their destinations in 15 days.'

'5. (i) Were sufficient passenger rolling-stock available, the Divisions from Port Elizabeth could be conveyed in 6 days, and from East London in 8 days.

(ii) The stores and supplies, say 7,000 tons, to be sent by rail from Port Elizabeth and East London to the advanced depots at Naauwpoort and Stormberg, will, it is estimated, take a week to transport, and it is presumed that the intervals between the arrivals of the various transports will enable these supplies, as well as the troops and horses, to be conveyed in the time specified.'

- '6. As regards Cape Town, provision for the transport of supplies has not been included in the estimate, and such supplies will have to be sent forward either before or after the troops, or else sent *via* Port Elizabeth.'
- '7. The stores and supplies for Naauwpoort and De Aar should be sent from Port Elizabeth, and those for Stormberg from East London.'
- '8. The Department will undertake to have boiling water in readiness for the troops at the meal stations, provided the military authorities supply the necessary utensils.'
- '9. A reserve of troops and horses or mules should be kept in Cape Town, so that a steady flow may be kept up, and carriages and cattle-trucks returning empty may not be kept lying idle. The same course to be followed at Port Elizabeth and East London.'

"Major Girourard, R.E., having arrived, will, I trust, relieve us of most of the work connected with the railway. I have offered to hand over a Deputy Assistant Adjutant-General and an Army Service Corps Captain to work under him, but he does not want to settle anything till Sir Redvers arrives."

"When the troops—a half-battalion of Infantry—first reached Stormberg, their Mounted Infantry, well-armed with wire-cutters, proceeded to cut paths in every direction, much to the annoyance of the local farmers, who were mostly Dutchmen. The farmers protested, and complained through the Civil Commissioner. Orders were at once sent up to restrain the zeal of the troops, who were perhaps somewhat too eager to try their new wire-cutters, and the farmers were requested to report any damage to the civil authorities. In due course the claims arrived. They were most exorbitant. One man claimed 10/- each, for half-a-dozen ostrich eggs, addled, he said, by the troops having disturbed his sitting bird. Another claim was for three or four wild buck, at £1 10s. apiece, which, it was alleged, had escaped through gaps in the wire. Another man claimed 10/- a day, for each of half-a-dozen natives engaged to watch the places where wire had been cut; while all charged from 30/- to 40/- for each piece of cut wire repaired. The little account, amounting to £139, which the Attorney-General (who is appropriately named Solomon) considers most reasonable, has, at the request of the High Commissioner, been paid, but it is the first time, I fancy, the War Office has

had to pay 10/- apiece, for addled eggs, and 30/-, for a buck having escaped from one field to another."

"I cannot help thinking an official should be sent out here as provided for in paragraph 169 of the *'Regulations for the Supply of an Army in the Field, and for the Organisation of the Lines of Communications.'* Such an official would well repay the cost of sending him. Personally, I have done my best by raising the question of railway rates, of paying volunteers, and of promulgating the Burgher Act to enable us to deal with a corner or a boycott. These three questions alone already mean a matter of many millions."

"The question as to what is contraband of war is still unsettled by the local legal authorities. I have asked whether I may not assume that stores found in the custom houses, or on the railway, consigned to firms in the Transvaal or Free State, and which might be useful for military purposes, belong to the consignees, and, if so, whether I may not 'commandeer' such stores and use them for our troops."

"I am very nervous about our transport. I hear of mules coming out in thousands, but I cannot ascertain whether harness is actually on the sea or is still in course of manufacture in England. This is a serious matter, and I am still worrying the Army Ordnance Department on the subject."

"As regards supplies, I hear the Commander-in-Chief at home is under the impression that six months' supplies for an Army Corps is already available in South Africa. No doubt this is a mistake. We have no reserve supplies here now. The few supplies sent from England, to date, have all gone up country, and we have bought so largely that I am afraid to buy more—prices are so high. The whole of South Africa relies upon supplies from outside. The war has played the mischief with trade, and for several months past merchants have been stopping all orders. Tens of thousands of refugees are now at the ports eating up everything like an army of locusts, while we are pouring troops into the country before supplies arrive. We want immediately oats, hay, and preserved provisions of all kinds. Several cablegrams have been sent to the War Office on this point, which, I hope, is fully realised there."

"I have a contract for meat, and on this, with meal which can be obtained locally, the troops can no doubt manage to exist; but if troops are shut up, even for a time, they must have large reserves of preserved provisions and biscuits; and, as for the animals, unless we get oats and hay they will soon be in a bad way. We have, already, from 10,000 to 15,000 volunteers, scouts, local corps, and drivers and leaders to feed, in addition to the troops sent from home."

"I am now inclined to think we shall not find any large

quantities of food either in the Transvaal or the Free State ; on the contrary, we may have to send supplies to Kimberley and Mafeking, as well as to the Free State and Transvaal, to supply the wants of the civil population."

"I have asked Colonel Ward to wire all his wants direct to England, as if I attempt to do this from here I am likely to get fogged. If Sir Redvers goes on to Natal I hope he will take me with him, as I am anxious to see how they are off for food and transport. I believe everything at Glencoe was abandoned to the enemy—food, tents, ammunition and equipment."

"I have endeavoured to help Natal by sending all Army Service Corps officers and men who can be spared, even temporarily, from here. These officers will sooner or later have to be replaced. We have three lines of communication in the Cape Colony, which triples the requirements of executive Army Service Corps officers and subordinates. I do not care so much for Staff officers at present, but I should like more executive officers for the lines of communication. Each officer should have sufficient stationery to last him a fortnight, and not less than two clerks. Natal still wants four Army Service Corps companies to complete the Infantry and Cavalry Brigades to a war establishment."

"I hope the question of Staff clerks is being considered. So far, we have had to hand over eight of our best supply clerks for 'A.' work, as naturally their offices cannot be starved. These men, however, we are not likely to see again."

"I was really glad to see Lieut.-Colonel Clayton. He is an excellent worker, and has already been able to relieve Colonel Bridge of a deal of work. Bridge has been much overworked. I hope that the increase of assistance will cause his health to improve. Colonel Johnson and Lieut.-Colonel Landon have started work in my office."

"The Admiralty have sent out a charming Naval transport officer—Captain Sir Edward Chichester—and I do not see the slightest chance of any friction this time between the Naval and Military authorities."

"When Sir Edward went to Natal the other day he found that, under the military contract, 10/- per horse or mule was being paid for walking the animal out of the vessel on to the wharf, and as a ship can discharge 300 mules this way in an hour, the price seemed excessive. This he represented to the disembarking officials, but was told they preferred to stick to their contract. He also was shown a letter to the contractor, in which it was agreed to maintain the rate in view of possible *Naval interference*. This has, of course, put the Naval people's backs up, and they have reported the matter to the Admiralty. As regards Cape Town, Port

Elizabeth and East London, I have arranged that no arrangements are to be made for landing troops without consulting the Naval transport people, and that the Naval transport officers should be asked to arrange all contracts themselves."

By the end of October, the following supplies had been collected :—

At Orange River, 3 months' for 9,000 men and 3,000 animals.

At De Aar, 3 months' for 2,500 men and 2,000 animals.

At Naauwpoort, 3 months' for 700 men and 500 animals.

At Stormberg, 3 months' for 1,000 men and 200 animals.

At Ladysmith, 3 months' for about 12,000 men and 5,000 animals.

As the advance of the enemy in any force over Norval's Pont or Bethulie Bridge, which were unguarded, might necessitate the withdrawal of the garrisons at Naauwpoort and Stormberg, Lieut.-General Sir Frederick Forestier-Walker decided not to keep more than three months' supply for the garrisons at these posts. This proved somewhat fortunate, as, shortly afterwards, when the enemy advanced south of the Orange River, and the Dutch-speaking colonists on the northern border of the Cape Colony joined them, it was found possible to withdraw the garrisons from both Naauwpoort and Stormberg without having to abandon any of the supplies which had been collected at those stations.

In forming the reserves referred to, and feeding the troops in the two colonies, the supplies sent out by the War Office were soon expended, and almost every pound of food and forage in the hands of merchants and importers at coast ports had to be rapidly bought up ; consequently, the prices of almost all commodities were abnormally raised. The civil population felt the competition of the military authorities, and petitioned the Cape Government to remit the duties on foodstuffs, with the result that the meat duty was suspended.

CHAPTER IV.

The Meat Contract and the Ration Scale.

The supply of fresh meat had become a serious consideration, in view of the large military force which would be operating against the enemy or guarding the extended lines of communication.

A contract was made with the South African Supply and Cold Storage Company for the supply of 4,000,000lbs. of fresh meat. This contract was extended to all fresh meat required by the troops for a period of one year, and when the first year expired the contract was again extended at reduced rates for a second year, and ultimately expired in March, 1902. The contract was for either live cattle or refrigerated meat, at the contractor's option.

The contract for meat having given rise to considerable discussion in Parliament, early in 1902, the following explanatory memorandum was addressed by me to the Quartermaster-General on the subject :—

“QUARTERMASTER-GENERAL,—

“As the officer responsible for making the contracts for meat with the Cold Storage Company, in 1899–1900, contracts the prices of which have been taken exception to in Parliament, I venture to offer the following remarks, which will, I trust, go to prove that instead of being extravagant, the terms of the contracts were, for supplying troops on active service in South Africa at the particular time, extremely favourable so far as the public purse was concerned.”

“When I reached Cape Town on the 3rd October, 1899, I found war imminent. It was necessary to make immediate arrangements for a meat supply for the large number of troops who would shortly be taking the field.”

“Now, the retail price of meat at Cape Town at this time was 1/- per lb., both for locally killed and refrigerated meat. At Buluwayo, the price reached as high as 2/6 per lb. There was a duty on imported meat, varying from 1d. to 2d. per lb., fixed no doubt with a view to keep up the price of locally grown meat. This duty, though it tended to raise the price

of cattle bred in the colony, was not paid on meat supplied to the Army and Navy, and it was eventually taken off altogether by the Cape Ministry. The Navy at Simons Bay, and the troops at Cape Town, were, in 1899, supplied by the Cold Storage Company with refrigerated meat at something under 6d. per lb., I do not know the exact prices."

"The reason for the high price of meat at this time was, in my opinion, due partly to the duty, partly because a feeling of unrest had put up prices all round—meat in sympathy with other commodities—but, principally, because the rinderpest had in recent years killed off between 50 and 75 per cent. of the entire stock of cattle in South Africa."

"Another factor which was likely to keep up the price of meat when war broke out, was that many of the Dutch population would be greatly disinclined to sell cattle or, indeed, any supplies, if they knew they were intended for the use of the troops."

"I, consequently, suggested to my General the desirability, from a supply point of view, of proclaiming martial law, or of taking advantage of the Colonial Burgher Act and 'commandeering' cattle and supplies generally in the Cape Colony with the aid of the civil authorities. The High Commissioner was approached on the subject, but there were, no doubt, political reasons for not resorting to an expedient which might have caused many of our difficulties in obtaining cattle, horses and locally-grown produce to disappear. I had, therefore, to find a contractor without delay, to carry out the service, and with this object I telegraphed to Natal and sent notices to every important firm of meat contractors in the Cape Colony."

"I ascertained that, in Natal, the cattle available would barely suffice for their own wants; in fact, shortly after the war commenced, I was obliged, in order to prevent prices rising abnormally, to stop Natal buying milch cows in the Cape Colony. I was also aware that we should require a very large number of trek oxen for transport purposes, which would further increase our difficulties in obtaining slaughter cattle. My recollection is that during the first fifteen months of the war some 150,000 had been employed in the military transport service in South Africa; of these, over 70,000 had either died from exhaustion, been killed or captured by the enemy, or had otherwise become inefficient through the waste incidental to military operations."

"Eventually, I received two firm offers, one from the Cold Storage Company, and the other from a Mr. Weil, to drive cattle with the troops, to feed, herd and slaughter them, and to issue dead meat whenever and wherever we might require it."

"As Mr. Weil had no connection with the meat trade and was already in treaty for a large ox transport contract, I did not like to put all my eggs in one basket by giving two very important contracts to the same individual. I, therefore, cabled (through my General) to the War Office, recommending the tender of the Cold Storage Company, which, from enquiries I had made, I considered the only firm in the Colony competent to carry out the service, and in due course War Office approval was received."

"The price originally demanded was, if I recollect rightly, 1/1 per lb. for meat from live cattle, but I demurred to this price as too high, and after several interviews with the general manager, I arranged that the company should be allowed at its own risk to supply imported (meaning refrigerated) meat, whenever possible, to troops in the vicinity of the railway at the all-round price of 11d. per lb. for both local and imported meat."

"This first contract was for 2,000,000lbs. of meat, with the option of taking a further 2,000,000lbs., should we require it."

"I deemed it advisable to commence with a comparatively small contract until I could communicate by letter with the War Office authorities, who would have direct access to the world's markets."

"Meantime, the War Office had been placed in communication with Sir J. Sivewright, a director of the company, who was in England, and eventually, after several cablegrams had passed, a contract was concluded for a twelve months' supply of meat at 11d. per lb. for meat from cattle driven with the troops, and 9d. per lb. for refrigerated meat. The reduced price for the latter was to apply to any refrigerated meat supplied under the original contract for 4,000,000lbs., while the contract held by the company for the supply of the troops in the Cape Peninsular at a low rate was to remain unchanged."

"It must be borne in mind that the company was bound to supply all troops, wherever they might be in the Cape Colony, the Free State, or the Transvaal, with meat of good quality. If they could supply refrigerated meat, so much the better for the company, as their profit would be greater, while, at the same time, this meat was better for the troops, as, not only was the price cheaper, but, neither forage, water, guards, herds or butchers would be required, and there would be no offal to breed flies and spread disease in the camps, as must be the case where cattle are slaughtered. When, however, troops moved at any distance from the railway it would, of course, be impossible to supply refrigerated meat, and live cattle would have to be driven. The quantity of refrigerated meat which was likely to be used was, consequently, very uncertain, and as this

was the first time the issue of refrigerated meat to troops in the field had been tried on any large scale, it was extremely doubtful whether it would be possible to carry out such a supply satisfactorily."

"As soon as their tender was accepted, the company were obliged to enlarge considerably their cold storage depot at Cape Town, to build others inland, to construct or hire refrigerator-cars, to manufacture ice in large quantities, as several tons were required to pack with the meat in each refrigerator-car. The company had, also, to pay to the railway administration the cost of the transit by rail of the refrigerator-cars, from the coast where the meat was entrained, to the depots at rail-head, a distance often of over 600 miles."

"Seeing that the company had a virtual monopoly of the refrigerated meat trade in the Cape Colony at the time, and considering the expenses and risks which they must incur in undertaking such an extensive contract, and the losses from meat becoming tainted in transit, I thought at the time, and looking back I am still of opinion, that the contract was a most economical one for the public."

"Had I attempted to import large quantities of live stock or frozen meat from America or Australia, to erect cold storage depots, to construct refrigerator-cars, to manufacture ice on a large scale, and to arrange for the transit of cattle and meat from the coast to rail-head, I feel convinced the cost would have been considerably higher than it has been, while the troops would not have been so well served. Besides, to make all these arrangements would have taken time, and time was of the utmost importance. The War Office did, at our request, try the experiment of importing 1,000 head of cattle from South America, but, when landed at Durban, they were so wild that they had to be slaughtered at once, and the cost of the dead meat they produced was found to average $1\frac{1}{2}$ a lb., which was a much higher price than we were paying."

"In Natal, where the local stock of cattle was larger proportionately than in the Cape Colony, and where the line of communications from the coast to rail-head were much shorter, the contract price of home-grown and imported meat was 1d. or so cheaper than the Cold Storage Company's contract rate, but I have not the exact figures by me."

"I left South Africa shortly before the last contract with the Cold Storage Company was concluded, and, before leaving, I wrote to Lord Kitchener's staff officer asking him to tell his lordship that the meat supply was the one thing I was still anxious about, as we were rapidly denuding the country of its stock of live cattle, that I thought it would be better to have one large contractor for our meat supply in the field than several small ones, who would be likely to compete with

one another and raise the price of cattle all round—there was an idea at the time of having a separate meat contract in each of several small districts,—that, as communication by rail with all South African ports had been restored, it might be possible to obtain more competition and thus reduce prices, but that, in my opinion, the Cold Storage Company and the De Beers Company (which had recently erected a cold storage plant at Cape Town) were the only two firms in South Africa, which could safely be entrusted with the contract.”

“On my reaching England, I heard that the Cold Storage Company had been successful in obtaining the contract, though at reduced prices.”

“Quite recently, my anticipations have again been verified, as only three firms tendered for the new contract to supply all the troops in the field, viz., the Cold Storage Company, the Mr. Weil to whom I have already referred, and the Imperial Meat Company, which, I understand, is connected with the De Beers Company, in whose buildings it has established its London offices.”

“In conclusion, I think it only right to say that if blame attaches to anyone for the meat contracts made with the Cold Storage Company, it must fall upon my shoulders, as I unreservedly accept the entire responsibility, both for having concluded the first two contracts with the company, and for having recommended the third, which was not, however, completed till after my departure.”

“(Signed) W. D. RICHARDSON,

“Colonel, A.A.G.

“Devonport,

“11th March, 1902.”

During the month of October, the following scale of provisions, forage and medical comforts had been drawn up, and was approved of by Sir Redvers Buller, on his arrival :—

SUPPLIES.

PROVISIONS, FUEL, LIGHT, ETC.

1. The daily ration for troops in the field will be as follows—
MEAT.—1lb., fresh or preserved.

Equivalents :—

Cheese 2 oz., equals 4 oz. fresh or 3 oz. preserved meat.

Bacon 4 oz., equals 4 oz. fresh or preserved meat.

Maconochie's ration equals a ration of meat and vegetables.

N.B.—When the supply of cattle is abundant the ration of fresh meat may, during active operations, be increased to $1\frac{1}{4}$ lbs.

BREAD STUFFS.— $1\frac{1}{4}$ lbs. fresh bread, or 1 lb. biscuit, flour or meal. When flour or meal is issued 7 cakes of patent yeast will, if available, be supplied per 100 lbs. of flour.

N.B.—When flour or meal is issued a good cake or damper may be made as follows :—

Mix a small quantity of yeast cake or baking powder and a little salt with one pound of dry flour ; then, add sufficient water to make it into a stiff dough : place on a gridiron, frying pan or in the ashes of a coal or wood fire, and bake for three-quarters of an hour.

One of Gillett's yeast cakes will suffice for every 15 lbs. of flour.

GROCERIES.— $\frac{3}{4}$ oz. coffee, or $\frac{1}{2}$ oz. tea, or half the ration of each, or 1 oz. chocolate, with 3 ozs. sugar, $\frac{1}{2}$ oz. salt and $\frac{1}{8}$ oz. pepper.

The sugar ration includes any required for lime-juice.

$\frac{1}{2}$ oz. of chocolate, in addition to the ordinary grocery ration, may, when available, be issued to nursing orderlies on night duty, at the discretion of medical officers in charge of hospitals.

VEGETABLES.—1 oz. compressed vegetables, or $\frac{1}{4}$ lb. onions, or $\frac{1}{2}$ lb. potatoes or other fresh vegetables, or 2 oz. split peas, or 2 oz. rice, or 1 tin pea soup.

2. EMERGENCY RATIONS.—One field service ration will be carried on the person by each officer and soldier, for use only in extremity.

3. FUEL.—2 lbs. of wood, or 1 lb. of coal, per man, as a maximum. Fuel will not be issued when it can be obtained on the march by the troops.

N.B.—Dried cowdung is an excellent substitute for fuel, and should, whenever practicable, be collected by the troops on the line of march.

4. LIGHT.—Hospitals, as required.

Guards, horse picquets, and offices—1 candle, per night, for each authorised lantern.

Officers—When ample supplies are available, 1 candle, per officer, per night, may be issued in standing camps.

For Occasional Issues, when Available.

LIME-JUICE.— $\frac{1}{2}$ oz. (one-tenth of a gill), when fresh vegetables are not obtainable and the medical officer considers the issue necessary. (Issues of lime-juice will not be made when a jam ration is issued.)

SPIRITS.—One sixty-fourth of a gallon ($\frac{1}{2}$ gill), at the discretion of general officers commanding divisions or detached bodies of troops, but not oftener than twice a week. (An extra ration of tea, or other equivalent, may be issued to abstainers in lieu of spirits whenever a ration is sanctioned for the troops.)

JAM OR MARMALADE.— $\frac{1}{4}$ lb. tin (about 4 oz.) may be issued to the troops daily, when a sufficient supply is available.

TOBACCO.—In quantities not exceeding 1 lb. per man, per month, on repayment at 1d. per oz.

Special Issues.

Whenever special issues are made of articles not referred to in the foregoing scales, the equivalents laid down in the allowance regulations will be followed, or, if not mentioned therein, the equivalents at which they are to be issued will be decided by the Commander-in-Chief.

Civilian and Native Employés.

The daily ration for civilian employés will be :—

- (a) White conductors—a soldier's ration.
- (b) Native headmen, and white or coloured drivers or leaders—a soldier's ration of meat, breadstuffs, and groceries only.
- (c) Kaffirs and other native employés—a ration of meat, breadstuffs, and salt only.
- (d) Whenever the exigencies of the service necessitate the issue of rations to employés not entitled to free issues, the following will be the rates to be charged for the same :—

2s. 1d. for a soldier's ration, 1s. 9d. for a ration for white or coloured drivers, 1s. 8d. for a ration for Kaffirs and other native employés.

N.B.—For coloured drivers, leaders and natives, $1\frac{1}{2}$ lbs. mealie meal will be the equivalent of a ration of breadstuffs, and when no meat is available the ration of meal may, when practicable, be doubled.

Rations for native employés attached to units will be drawn regimentally.

Rations will not be issued to white or native employés working at or near the station where they reside. Rates of pay should be fixed to cover the cost of food.

Indian Natives.

The daily ration for Indian natives will be :—

Rice, flour, meal, choora, powa, or atta, or a proportion of each		1½ lbs.
Ghi or butter (when available)		2 oz.
Groceries (tea in lieu of coffee)		as for Imperial Troops
Vegetables		
Fuel		
Meat (mutton or goat only for Hindus) specially killed		
—on Fridays only		2 lbs.
Chillies or turmeric, when procurable		½ oz.
Tamarind or amchoor	do. .. .	½ oz.
Curry powder	do. .. .	½ oz.

Goor, when available, will be issued in lieu of sugar.
Dholl, 2 ozs., in lieu of the vegetable ration.

FORAGE.

The daily ration will be :—

Horses		12 lbs. grain
Mules		8 lbs. „

Horses of large size, or doing hard work, may receive an additional 2 lbs. of grain, if considered absolutely necessary by the commanding officer, and if the extra quantity is available.

2 lbs. of hay may be substituted for each pound of grain to such extent as may be ordered by the commanding officer. The ration substitute of hay will not, however, exceed 8 lbs. per diem.

At depots near the coast, when sufficient quantities of forage are procurable, the following rations may be drawn, viz:—

Article.	Large English Horses.	Other Horses.	Mules.
Grain lbs.	12	10	8
Hay „	12	10	6

$\frac{1}{2}$ oz. of salt, per animal, may be drawn, when available, and should be mixed with the grain ration.

Whenever possible, horses should be grazed, or grass cut for them, in order to minimise the quantity of forage to be carried.

The entire ration will not be drawn when sufficient grass is available.

Feeding Animals.

Forage for animals should not be placed on the ground. Such a practice is likely to produce sand colic, besides wasting the ration. Whenever practicable, mangers should be extemporised from empty cases, old canvas, sacks, and even blankets or soldiers' frocks.

TROOPS AND ANIMALS PROCEEDING BY RAIL.

Troops and animals entrained at coast ports for conveyance to advanced posts will, in addition to the emergency ration carried by the soldier, be furnished with four days' rations on the following scale :—

Daily Ration for Troops.

1 lb. meat.
1 lb. bread or biscuit.
and a field grocery ration.

Daily Ration for Animals.

			Horses.	Mules.
Grain, lbs.	..	..	9	6
Bran, lbs.	..	..	6	6
Salt, oz.	..	..	$\frac{1}{2}$	$\frac{1}{2}$

On reaching a depot, the station commandant will decide whether the rations already consumed should be replenished, and to what extent.

When troops and animals are sent direct from the ship to the train, the disembarking staff officer will decide whether the four days' rations are to be provided from the ship's stores or by the Army Service Corps at the port of disembarkation.

HOSPITAL SUPPLIES.

FIELD HOSPITAL RATIONS.—A field ration will be drawn, daily, for each patient, and as this contains bread, meat and groceries sufficient for a man in full health, it should, by suitable cooking and with the addition of some of the extras mentioned in the next paragraph, be capable of being adapted to most cases of illness.

EXTRAS FOR PATIENTS.—Preserved milk, extract of beef, arrowroot, rice, cocoa, and milk, brandy and a few other extras can be obtained from the Army Service Corps, on requisition. Fresh milk, eggs and fowls will, when procurable, be purchased by the Army Service Corps, but should be requisitioned at least 24 hours before being required.

FIELD HOSPITAL SUPPLY CASES.—Field medical panniers (containing a small quantity of wines, spirits and other medical supplies) will be drawn from the Army Ordnance Department by officers proceeding in medical charge of units on the march.

CUSTODY OF KEYS OF FIELD HOSPITAL CASES.—Medical officers will invariably retain the keys of these cases in their own possession, and will draw supplies, as required, for refilling them.

REQUISITIONS FOR EXTRAS FOR FIELD HOSPITALS.—When extras are requisitioned by medical officers, the requisitions should state the number of patients in hospital, and the number of days for which the extras are estimated to last.

SCALE OF EXTRAS FOR HOSPITAL DIETS.—The requirements as regards medical comforts and disinfectants are calculated on the following scales :—

For 1,000 Hospital Diets.

Arrowroot	..	..	..	..	6 lbs.
Bovril	..	..	..	..	5 lbs., in 4 oz. tins.
Brandy	..	..	..	..	10 bottles.
Calf's-foot jelly	..	..	..	..	10 pint bottles.
Champagne	..	..	..	..	6 pint bottles.
Cocoa paste	..	..	..	..	20 tins.
Cornflour	..	..	..	..	6 lbs.
Fowls, roast, preserved	..	..	..	..	20 lb. tins.
Meat, extract or essence of	..	..	..	..	6 lbs., in 4 oz. pots.
Milk, condensed, sweetened	..	..	..	..	150 tins.
„ „ unsweetened	..	..	..	..	150 tins.
Pearl barley	..	..	..	..	10 lbs.
Oatmeal	..	..	..	..	4 lbs.
Soups	..	..	..	..	6 lbs.
Port wine	..	..	..	..	24 bottles.
Sago	..	..	..	..	6 lbs.
Sugar	..	..	..	..	30 lbs.
Whisky	..	..	..	..	10 bottles.

DISINFECTANTS.—When available, and certified as necessary by the medical officer :—

For every 1,000 British Troops, per Day.

Carbolic acid powder	..	..	$\frac{1}{2}$ lb.
Chloride of lime	..	..	2 lbs.
McDougall's disinfectant powder			1 lb.
Izal	..	..	$\frac{1}{2}$ gal.

Medical officers will be careful to adhere to these scales as far as possible.

NEWSPAPER CORRESPONDENTS.

Rations may be issued, on repayment, to newspaper correspondents, duly authorised to accompany the troops in the field, who may also draw rations for one servant and one horse, apiece.

The authorised rate of stoppage will be 4s. per man's ration, and 5s. per forage ration. Payment for a month in advance must be made to an Army paymaster, who will notify on the receipt the number and description of the rations for which payment has been made. This receipt, which is the authority for issue, will be produced when rations are demanded, and the supply officer issuing will note on the back of the receipt the number of rations issued by him, and will quote the number and date of the paymaster's debit voucher on the issue voucher signed by the correspondent. Should payment to an Army paymaster be impracticable, it will be made to the supply officer.

This scale was amended from time to time, especially as regards medical comforts, the consumption of which had been much under-estimated by the medical authorities.

As many equivalents as possible were introduced into the ration scale. The experience gained in previous campaigns has proved that to keep troops in good health and spirits it is necessary to constantly vary their diet. When quartered in barracks they can purchase extras in the canteen; but, on service, they have, as a rule, to rely almost entirely on the rations served out by the Army Service Corps.

A *daily* ration of jam was introduced into the field ration for the first time, on service, and has been appreciated by the soldier probably more than any other item in his dietary. It helps the biscuit to go down on the march and, in standing camps, when bread is supplied, it takes the place of butter.

CHAPTER V.

The Arrival of Sir Redvers Buller with the Army Corps, and the Preparations for an Advance.

On the 31st October Sir Redvers Buller reached Cape Town, and finding that little, if any, of the supplies ordered from home in September had reached the country, directed a four months' supply for all troops serving in South Africa to be purchased at all costs, and to be always maintained at the various depots.

All the South African Volunteer Corps had by this time been called out, while irregular troops were being raised, equipped, and hurried to the front in every direction.

At the beginning of November the position of affairs was, briefly, as follows :—

In Rhodesia, Colonel Plumer was watching the northern border of the Transvaal, with his headquarters at Tuli, his force being supplied from Buluwayo.

Mafeking was *en l'air*, but had supplies to last the white population for, at least, four months.

In Kimberley, which was closely invested, about seventy days' supplies for troops and inhabitants were available.

In the Cape Colony the Boers, crossing the Orange River at Norval's Pont, Bethulie and Aliwal North, were advancing southwards. Their advance necessitated the withdrawal of the small garrisons at Naauwpoort and Stormberg.

In Natal, after some sharp fighting in the vicinity of the coalfields at Dundee, our troops had been driven back on Ladysmith, where they were besieged by the enemy. On the 29th October, some ninety days' supplies for the garrison were reported by Colonel Ward to be available. Troops and horses were arriving at all four South African ports and were being pushed to the front as fast as the railways could convey them, while few supplies, except those which could be purchased locally, were as yet available.

Extracts from Diary.—"Cape Town, 7th November, 1899. As regards Kimberley, the officer commanding reports he has only seventy days' supplies for the population. I have had a message sent to him to make this last for at least one hundred days. There must be a lot of stuff in Kimberley which could be collected by judicious management."

"When Sir Redvers arrived, he decided that one man could not manage both supplies and transport for such a large business, as this seems likely to be: consequently, I have been turned into a director of supplies, and Colonel Bridge into a director of transport."

"I think this arrangement is a mistaken one, as Colonel Bridge and I must now work together as a kind of Siamese twins, and if one of us happens to disagree with the other the troops will suffer. However, the great thing is to try and run the show with as little friction as possible."

"Sir Redvers issued the following order:—

'Pending the organisation and equipment of the Field Army the following will be the distribution of staff duties in the Cape Colony:—

'The Chief of the Staff under the General Commanding-in-Chief will supervise the organisation, distribution, and equipment of the units arriving from England.'

'The Director of Supplies (Colonel Richardson) and of Transport (Colonel Bridge) will, during this period, act as Officers of the Headquarter Staff under the Chief of the Staff.'

'N.B.—It is recognised that the duties of these two Officers have no sharp dividing line. The above division is merely made for the adjustment of details. In a time such as the present the duties of these officers must be mutually performed, and many minor points will be decided by the senior.'

'The duties of Commandant of Base will, during this period, be performed by Sir F. Walker, who will supervise the three ports of arrival—Cape Town, Port Elizabeth, and East London; arrange embarkations and disembarkations, provide railway facilities, and generally, through his staff, see that the duties of the several local base commandants are effectively performed. He will also issue orders in accordance with instructions from the Chief of Staff to individual officers not attached to units.'

'(Initialled) R. B.

'1st November, 1899.'

"Colonel Ward went up to Ladysmith with Sir G. White, and has got shut up there: consequently, I can get very little

news from Natal as to what they actually want. Even their code book is at Ladysmith."

"On the 29th October, I received a telegram from Ward that three months' supplies of everything were at Ladysmith, and that ample supplies were available at Pietermaritzburg, but, two days ago, I received an enormous demand from the General of Communications in Natal, for provisions, including 400,000 rations of preserved meat, biscuit, compressed vegetables, groceries and other stores. We have, as yet, received hardly anything from England in the way of supplies, and the quantities shown on our states have mostly been purchased locally at high rates."

"Sir Redvers was much annoyed when he arrived, as he expected two and a half months' reserve supply would have reached South Africa by the middle of October."

"As Natal sent their demands direct to England, I am not aware what they have demanded or what is on sea for them. I anxiously await the arrival of supplies, as Cape Town is well nigh exhausted, and with large demands from Natal just as I am endeavouring to prepare for the force to be sent to De Aar and Orange River Station, I am at my wits' end to know what to do."

"Natal is buying supplies largely, and this affects our local markets. I have wired to the General of Communications in Natal to consult the civil authorities and requisition what is wanted at reasonable prices."

"We are sending three Brigades to Na'al, and the Army Service Corps companies are consequently being changed. The three Army Service Corps companies marked off for the 2nd Division will now go to Natal with one Brigade from each of the three Divisions. I have stuffed everything I can get up to De Aar and Orange River Station, as, if we relieve Kimberley, we shall at once have some 40,000 mouths demanding food there besides having to replenish the place, unless we evacuate it altogether, as I wish we had at first. It is a nasty march of about seventy miles from the Orange River to Kimberley, over a sandy road with very little water. except at the Modder River, and it is sure to be very hot at this time of the year for both men and horses. I hope we may eventually go into the Free State by the railway, but the relief of Kimberley may prevent any move of the sort for the next few weeks, at any rate. Everyone is crying out for mule harness, which cannot be bought locally and which has not arrived from home."

"9th and 10th Brigades are being formed here, one under Colonel Featherstonhaugh, but I do not know who is to command the other. I have been ordered to find Army Service Corps companies for them. We are also raising thousands more volunteers."

"Ovens may run short, as only eighty were sent out with the Bakery Company, which we have had to split up at once into eight sections. I am wiring to Natal to know if they have sufficient ovens available; if so, I will keep back some of those I was sending there."

The Army Service Corps supply establishments having been sent out from home without any organisation, the warrant officers, non-commissioned officers and men were, on reaching South Africa, formed into a company (No. 38), with its headquarters at Cape Town.

The warrant officers, non-commissioned officers and men were formed into depot units of clerks and butchers, and into bakery sections of bakers. The composition of these was :—

EACH DEPOT UNIT.

Clerks.

- 1 Warrant officer or staff quartermaster-sergeant.
- 2 Staff sergeants.
- 3 Corporals or privates.

Butchers.

- 5 Non-commissioned officers and men.

EACH BAKERY SECTION.

Bakers.

- 2 Master bakers.
- 4 Foremen.
- 4 1st hands.
- 10 2nd and 3rd hands.

No. 38 Company eventually comprised nearly 2,000 of all ranks, widely distributed throughout South Africa. To pay them, the officers, under whom the men were immediately serving, obtained the necessary cash from the field paymasters, who entered the sums disbursed as imprests issued to the Officer Commanding No. 38 Company, to whom statements of the amounts paid with the receipts of the men attached were periodically forwarded by the Army Service Corps officers. This organisation proved a satisfactory one, and the Company, large as it ultimately became, was one of the few units which was able to regularly render its accounts and returns during the war.

Extracts from Diary. "Cape Town, 7th November, 1899. As soon as we advance, a good many Army Service Corps officers and clerks will be required to replace those locked up at Kimberley, Mafeking and Ladysmith, and those who may go sick or get knocked over."

"So far as I can learn, thirteen Army Service Corps and Indian Commissariat officers are shut up in Ladysmith. Luckily, I sent nine Army Service Corps officers, a transport company and 150 supply men to Natal last week, though I had to starve the Cape Colony to do so."

"The stationery people have arrived. They have no stationery at present, but expect plenty shortly."

"Three cases of stationery reached me from the Army Ordnance Department only this morning. Some stationery should be drawn by staff officers and units before they leave England. When sent in transit through the Army Ordnance Department, it may often take weeks and even months to reach its destination."

"It has been settled that every volunteer who will ration himself or his horse is to get 2/6 a day for each. This, although it may seem expensive, is cheaper than starting supply depots all over the Colony."

"In sending out supplies it must be remembered that grocery rations may at any time be increased, especially the sugar, tea, coffee and cocoa, while the loss on these supplies is at least ten, and often twenty, per cent."

"In Natal and the Cape Colony, we shall, with volunteers, etc., soon have over 100,000 men and 50,000 animals to feed, and as local markets are exhausted we want nearly everything from home."

"I have wired to Natal to 'commandeer' what stores they want, and pay for them at rates considered fair by the civil authorities, as I cannot let them run up prices against this Colony, which they seem likely to do, as they are in urgent need of preserved supplies."

"I have been robbing the railway during the last two or three weeks, and have 'jumped' about fifty truck-loads of supplies of different sorts consigned to firms in the Transvaal and Free State, and to others in Kimberley, Mafeking and places north of the Orange River, where the railway line is cut. I have by this means been able to increase the stock at De Aar and the Orange River Station, where we shall have four brigades in another fortnight, during which we shall not be able to use the railway much. At present, we cannot use the Port Elizabeth or East London lines for fear of the Boers, who have crossed the Orange River and are somewhere north of the Naauwpoort-Stormberg line of railway. This curtails our facilities for moving supplies to about half of what I

originally anticipated, so I am lucky in having been able to get up so much food to De Aar and Orange River Station. I have always been afraid I might lose it, but, if troops arrive during the next two or three days, both places ought to be safe enough."

"From the date of my arrival on the 3rd October till to-day, we have received nothing in the way of supplies, except the small quantities on the 'Dunottar,' 'Tintagel,' and 'Tantallon' 'Castles' (most of which I sent to Natal), and those on the 'Albana,' which had a month's supplies for the 9th Lancers and an ammunition column."

"Cape Town, 14th November, 1899.—Troops are now arriving quickly, and being pushed up country as fast as possible."

"Colonel Bridge has settled down to transport work. Lieut.-Colonel Clayton is commanding Army Service Corps companies and doing real good work. I have strengthened the Army Service Corps staff with the Cavalry Division by giving them Captain Foster as an additional D.A.A.G."

"Besides the few stores in the 'Gascon,' no supplies have reached us from home this week except the fifteen days' on ships with troops, and we shall have over 120,000 men and 60,000 animals to feed in a few days, here and in Natal, besides the possibility of supplying for a time the wants of a population of over 40,000 people when we relieve Kimberley."

"In Natal, the numbers being fed are approximately:—

"39,000 soldiers and native drivers.

"1,243 Indian followers.

"8,100 horses.

"5,769 mules.

"5,328 oxen."

"So far, everything has worked smoothly, but the real pressure is to come, and we cannot safely occupy Bloemfontein or Pretoria without having three months' supplies to push up at once, and make us quite safe even if our lines of communication were to be cut for a time."

"We cannot look into the future, but, assuming that we advance into the Free State soon, we must have enormous food supplies to send forward, and I have, therefore, with Sir Redvers' approval, purchased everything I can lay hold of. Natal is now better off for Army Service Corps personnel than we are here, and if I can only get them to answer my letters and send in weekly returns I shall be in a position to judge of their requirements, but with so many officers locked up in Ladysmith I have been able to get but little information except that they have been buying up everything at Durban."

"I am now endeavouring to fill up Orange River Station with a million soldiers' rations and half a million rations for animals; De Aar with half that quantity; Port Elizabeth and East London each with half a million soldiers' rations and 300,000 rations for animals—all as a reserve."

"If, however, the troops are successful in their move on Kimberley, and we can seize the railway bridges into the Free State before they are blown up, our line of advance will probably be transferred to the Midland and Eastern lines of railway, and we shall want much larger quantities of supplies at Port Elizabeth and East London. It will thus be better to use the supplies accumulated at the Orange River and De Aar, or most of them, for replenishing Kimberley and perhaps Mafeking, making fresh advance depots on the Free State border with supplies sent along the Midland and Eastern railway systems."

"Thus, we require an enormous reserve of rations, as the situation changes so often that it is necessary to be prepared at every point with sufficient food to obviate the possibility of troops being unable to advance for want of supplies."

"As regards oat-hay, which is the only forage grown locally, the crop is a bad one. We cannot bale this hay until it has been harvested for some two months, otherwise it heats and rots. We cannot send it by rail without being baled, and we are therefore in rather a tight corner with regard to forage. Horses (English) will not eat mealies (Indian corn), as they are not accustomed to them. I have, therefore, bought up all the oats and bran available locally. The latter I use as a substitute for hay, keeping all English hay and locally-grown oat-hay for English horses."

"Cape Town, 21st November, 1899. Every station is howling for supplies, but next to nothing has arrived so far. General Clery wires, from Natal, that he has no emergency rations for his troops, and as we have none here to send him he has been told to purchase any substitutes he can get locally. Sir Redvers has addressed a forcible communication to the War Office on the subject."

"The want of supplies makes me very anxious, as the absence of any article which is not forthcoming when demanded, is at once described as a breakdown of the Army Service Corps, which is quite helpless in the matter, and we can only continue to buy every pound of preserved meat, flour, biscuit, groceries, jam, grain and hay, as it arrives by sea from day to day."

"Natal is now very short of preserved provisions, except perhaps the troops locked up in Ladysmith, who are supplied

for quite two months, I believe. It was lucky Sir George White, when coming out on board ship, approved of a regulation that three months' supplies should be collected and sent to every station or post we occupied in Natal."

"My present position here is as follows :—I am buying to fill up De Aar and Orange River Station with 1,000,000 soldiers' rations and 500,000 forage rations; also, Port Elizabeth and East London with 500,000 soldiers' rations and 300,000 forage rations at each place."

"The troops have advanced from the Orange River to Kimberley, taking with them large trains of supplies."

"More troops in considerable bodies will shortly be operating south of the Orange River along the Free State border, and will require supplies from Port Elizabeth and East London."

"Imagine the difficulty of supplying troops and maintaining reserves at our depots when we have hardly a pound of food left in store at Cape Town."

"The last ships with supplies which arrived were the 'Briton' with provisions, and the 'Wilcannia' with oats, but the small quantities on these ships were like drops in the ocean, and disappeared as soon as landed."

"We constantly receive War Office advices that enormous quantities of supplies have been ordered to be shipped; but, as no ship is named and the supplies do not arrive, we do not know what to think."

"Even when a ship does arrive she often does not contain the stores notified as shipped by her; for instance, the 'Briton,' which was to bring 40,000lbs. of sugar, only brought 26,000lbs., whereas, the 12,000lbs. of tobacco reported to have been shipped in this vessel expanded into 20,000lbs."

"I have, only to-day, received bills of lading and vouchers for the stores ex 'Illovo' and 'Dunottar Castle.' The former left England on the 9th and the latter on the 11th October. The bills of lading are dated the 9th and 11th October, but the covering letters are dated the 30th and 31st October."

"Cape Town, 28th November, 1899. Supplies are beginning to arrive, though I do not think we have received anything like the first months' reserve reported to have been despatched from England by the 30th ult."

"I hope the War Office are sending monthly consignments direct to Natal for the force now in that Colony. The delay in unloading and transhipping here is enormous, and quite an unnecessary strain on the Army Service Corps."

"The original arrangement to send supplies to Natal, East London, Port Elizabeth and Cape Town was the best, but so many alterations have been made in the destinations of

the troops that, to my sorrow, this arrangement has partly fallen through."

"Sir Redvers would not let me go myself, so I have sent Johnson up the line to Lord Methuen to see if he wants anything. He reports everything satisfactory from a supply point of view."

"The arrangements are that Lord Methuen takes fifteen days' food (tinned) for his force, by rail, bread and fresh meat being sent him daily from the Orange River Station or De Aar. If the enemy do not cut the line behind him this should work satisfactorily."

"The following articles of hospital comforts have not yet arrived in sufficient quantities to meet demands:—Sago, port wine, whisky, oatmeal, pearl barley and stout. These stores are shewn in the War Office lists as ordered, but, in several instances, none have yet been received."

CHAPTER VI.

The Supply and Transport Arrangements during December, 1899,
and January, 1900.

By the end of November, supplies were distributed, as follows :—

Western Line.

At Buluwayo.—Six weeks' on hand.

At Mafeking.—Three months' for whites, but food for natives running short.

At Kimberley.—Fifty days' for the military and civil population, and thirty days' for animals.

At Orange River.—Three months' for 7,000 men and 3,000 animals.

At De Aar.—Three months' for 11,000 men and 4,000 animals.

At Cape Town.—Three months' for 5,000 men and 1,000 animals.

Midland Line.

At Naauwpoort.—Three months' for 2,000 men and 1,200 horses.

At Port Elizabeth.—Three months' for 5,000 men and 3,000 horses.

Eastern Line.

At Queenstown.—Three months' for 1,800 men and 900 horses.

At East London.—Three months' for 6,000 men and 1,100 horses.

Natal.

At Ladysmith.—About two months' for some 10,000 men, but forage running short.

Along the Durban-Colenso Line.—Three months' for 24,000 men and 14,000 horses and mules.

On the 25th November Sir Redvers Buller proceeded to Natal, while Lord Methuen advanced from the Orange River with a force of 8,000 men.

Lord Methuen, after three sharp engagements, reached the Modder River on the 28th of the month. His force was supplied daily with fresh provisions by rail from the advanced depot at the Orange River Station.

A depot of twenty-eight days' tinned supplies was formed at the Modder River. This was subsequently increased to forty-two days', and eventually to sixty days' supply for men and animals.

On the Midland line, Naauwpoort, which had been evacuated on November 3rd, had been reoccupied by General French, and the depot replenished from Port Elizabeth.

On the Eastern line, Stormberg had been evacuated, and General Gatacre's force, with headquarters at Putter's Kraal, was supplied, *via* East London, from depots formed at Sterkstroom and Queenstown.

In Natal, a force of some 42,000 whites, 3,000 natives, 8,000 horses, 6,000 mules and 5,000 oxen was being fed. Three months' supplies for these troops had been collected at and north of Durban.

In December, unsuccessful attacks on the enemy were made by General Gatacre, at Stormberg, on the 10th; by Lord Methuen, at Magersfontein, on the 11th; and by Sir Redvers Buller, at Colenso, on the 15th.

During December, supplies began to arrive more freely at all four South African ports, and by the end of the month little further anxiety was felt as to the possibility of food or forage running short at the coast. The difficulty now experienced was to forward supplies up country at the same time as the troops, with their guns, horses, mules, wagons, ammunition and equipment.

As the supply of the large bodies of troops operating many miles away from their bases on the sea-coast was dependent entirely upon the railway, the Cape authorities, who gave every assistance in their power to facilitate the movement of troops and stores, decided to divide the rolling-stock in the Colony into three portions, and to keep one half on the line Cape Town—De Aar—Orange River, one quarter on the line Port Elizabeth—Naauwpoort, and the remaining quarter on the line East London—Queenstown—Stormberg.

By landing proportions of the supplies at each of these three ports, it became possible to utilise every available truck in conveying them from the coast to the depots in course of formation at the advanced posts in the Colony, as well as to feed the troops guarding the railway.

Similarly, supplies for the forces operating in Natal were

shipped direct to Durban, and were conveyed by the Natal Government railway to the various depots along the line of communications.

The following arrangements were made for the conveyance of supplies with troops operating at any distance from the railway :—

Two or more days' biscuit and groceries were carried, on the person, by each soldier, in addition to an emergency ration, and a days' corn on the horse. Live meat was driven.

Two days' tinned supplies for men and forage for horses and mules were carried in the regimental mule transport and, when practicable, replenished daily from a supply park.

As many days' supplies as the General-in-Chief might consider necessary were carried as a reserve in a supply park (ox or mule). These were so packed as to enable a force, detached at any time from the main army, to be accompanied by the number of days' rations fixed upon.

The following was the system of loading adopted :—

PROVISIONS.

Mule Section.—Twelve wagons, each carrying 4,000lbs. and containing 18,200 rations of breadstuffs, groceries, etc. and 5,040lbs. of preserved meat.

	Gross lbs.	Rations.
7 wagons of biscuit, 65 cases in each	27,300	18,200
2 wagons of preserved meat, 70 cases per wagon	7,980	5,040
3 wagons of groceries :—		
Chocolate, 8 boxes	496	6,400
Tea, 5 cases	250	7,200
Coffee, 5 cases	300	4,800
Sugar, 43 bags	3,569	18,318
Salt, 7 bags	581	17,920
Pepper, 2 cases	80	23,040
Compressed vegetables, 20 cases	1,200	13,800
Rice, 5 bags	415	4,200
Rum, 40 cases	2,240	5,120
Lime-juice, 50 jars	950	16,000
Jam, 24 cases	1,800	5,184
Candles, 1 case	60	252
Carbolic powder	59	—
	12,000lbs.	

Ox Section.—Ten wagons, each carrying 6,000lbs., and containing 20,000 rations of breadstuffs, groceries, etc., and 7,200lbs. of preserved meat.

	Gross lbs.	Rations.
5 Wagons of biscuit, 100 cases in each	30,000	20,000
2 Wagons preserved meat, 100 cases in each	11,400	7,200
3 Wagons of groceries :—		
Chocolate, 10 cases	620	8,000
Coffee, 8 cases	480	7,680
Tea, 5 cases	250	7,200
Sugar, 53 bags	4,399	22,578
Salt, 9 bags	747	23,040
Pepper, 2 cases	80	23,040
Compressed vegetables, 23 cases	1,380	14,700
Rice, 10 bags	830	8,400
Rum, 65 cases	3,640	8,300
Lime-juice, 60 jars	1,140	19,200
Jam, 50 cases	3,750	10,800
Candles, 1 case	60	252
Carbolic powder	59	—
	17,435	lbs.

FORAGE.

Mule Section.—Twelve wagons, each carrying 4,000lbs.

	Gross lbs.	Rations.
7 Oats	27,552	2,240
3 Mealies	11,742	948
1 Bran	3,596	289
1 Compressed forage	3,936	320
Salt	118	—
	3,797	

Ox Section.—Ten wagons, each carrying 6,000lbs.

5 Oats	29,930	2,433
3 Mealies	17,922	1,450
1 Bran	5,970	480
1 Compressed forage	5,986	486
Salt	118	—
	4,849	

MEDICAL COMFORTS.

			Cases.		Gross lbs.		Net lbs.
Arrowroot	..	..	2	..	96	..	72
Bovril	..	..	4	..	248	..	144
Extract meat	..	..	4	..	248	..	144
Cocoa and milk, or cocoa							
paste	..	..	4	..	236	..	192
Soups, assorted	..	..	4	..	224	..	120
Condensed milk	..	..	18	..	1,062	..	854
Oatmeal	..	..	2	..	88	..	64
							Bots.
Port wine	..	..	4	..	200	..	40
Whisky	..	..	4	..	200	..	40
Brandy	..	..	4	..	200	..	40
							lbs.
Sago	..	..	2	..	88	..	64
Carbolic Powder	..	..	10	..	590	..	400
							Rations
Candles	..	..	1	..	42	..	252
							Boxes.
Matches	..	..	1	..	40	..	720

Load for mule wagon.. .. 3,562lbs.

For load of ox wagon, add one-third to above.

For a soldier to stow away on his person a two days' supply of biscuit, besides a couple of rations of tea, coffee or cocoa, with salt, sugar and pepper, as well as an emergency ration, which was usually supplied in a somewhat unwieldy tin, furnished with sharp edges, is by no means an easy task.

The biscuits break and make holes in his haversack, in which he often keeps his pipe and tobacco; while the tea, salt, pepper and sugar mix together in his mess-tin. In peace time, neither the soldier nor, what is more important, the officer are practised in carrying a field service ration. Had this been the case, a more suitable method of packing and carrying food on the person would, long ago, have been decided upon. Tea might be compressed into cakes, each sufficient for a ration. Biscuit that would not break so easily might be supplied. Loaf sugar, cut into suitable cubes, might be used instead of brown sugar. Sticks of chocolate, wrapped in tin foil, and small tins of assorted jams and potted meats might be substituted for the present unappetising emergency ration.

With regard to forage, anyone who will ride a few miles at a canter, with a well-worn corn or nose-bag, containing 8lbs. of grain, tied to his saddle, will soon realise the impracticability of attempting to carry a corn ration in such clumsy receptacles at any pace exceeding a walk.

Commanding officers, as a rule, favour a regimental supply train, carrying one or more days' rations, but, on service, the objections to this seem to far outweigh the advantages. Take, for instance, an infantry battalion in a brigade. It may be left behind to occupy a post on the line of communications where its regimental supply train will not be required, while the other units in the brigade may be required to make forced marches, during which additional food and, consequently, additional transport will be wanted.

A wagon, containing, say, biscuit, may break down and be abandoned, with the result that the particular battalion to which the wagon belongs may have to go without bread-stuffs, while the remaining units have plenty of everything. After an engagement, a battalion may be ordered to occupy a strategical position at a distance, whereas its regimental supply wagons may be in rear of the brigade and even of the divisional transport, and be unable to reach it for days.

It would seem far preferable if supply columns were brigaded. One or more wagons could then be loaded with biscuit, others with groceries, forage and so on; whereas, with regimental transport, each wagon must draw portions of its load from several different stores, thus impeding the work of the Army Service Corps, and blocking access to and egress from the supply depot or park.

With a brigade supply column, it is probable that at least one or two wagons of biscuit and forage will reach their destination, even over the roughest roads, in time to enable the contents to be distributed so that every man and animal in the brigade may receive some portion of his ration.

Each unit should, however, be supplied with a light mule wagon in which the cooking-pots and the day's fresh meat, groceries and vegetables could be carried immediately in rear of the unit.

As regards the supply park, the advantage of loading sections of wagons with equal quantities of supplies and forage is considerable, for, when a force advances by several roads, it is a simple matter to separate the supply park into two or more divisions, one of which can follow the troops on each of the roads until a fresh concentration takes place, when the divisions of the supply park can rejoin one another. The quantity of supplies remaining in the supply park at any given moment can also be calculated to a nicety.

Extracts from Diary. "Cape Town, 6th December, 1899. We are sending supplies up to the front as fast as trains will take them. I expect that Lord Methuen will fight on

Friday or Saturday and communication with Kimberley be open on Sunday, when I hope to put in supplies for the garrison there, and to clear out some of the civil population and thus reduce the number of mouths to be fed in case the place is again invested."

"Yesterday, I heard Colonel Plumer was running short of food, and I have wired to Salisbury, *via* Beira, to know whether it is worth while sending supplies round from here to Beira, for his force. I am rather afraid that everyone in these distant places will become a volunteer and want rations."

"As Mafeking is running short of food for natives, I have made a secret arrangement with a contractor to revictual the place—of course for an ample consideration—and though the plan may fail it has, I think, some slight chance of success."

"Lord Methuen's force captured a good many cattle at its first fight, but I hear since that the Boers have got most of them back, with some of our slaughter cattle into the bargain."

"General Gatacre has looted a mill at Molteno, in the Cape Colony, and removed the flour, etc., to prevent the Boers capturing it. The owners have sent me in a pretty stiff bill for compensation, which I do not propose to pay unless they come down to more reasonable prices."

"The supplies on several ships have arrived in a woeful plight, and carpenters have to be employed nailing cases together, no doubt after a good portion of their contents has been pilfered. I trust cases sufficiently strong to bear the ordinary rough usage on board ship will be sent out in future, as it is hard to have to mend packages in addition to one's other work."

"Ships constantly reach Cape Town without vouchers, bills of lading or notice of any kind, except perhaps a brief cable message to tell us what tonnage of supplies has been shipped, and whether forage or groceries. Take the ss. 'Scot,' which has just unloaded. We have received no information whatever as to the supplies on board this vessel except the War Office cablegram."

"We are in rather a fix about railway transport, upon which we can alone rely for the supply of the troops at the end of our long lines of communication. Each general likes to have two or three trains full of supplies ready to advance with his troops. This of course requires a large number of trucks, besides blocking the line, though it saves the labour of loading, unloading, stacking and reloading. For the past two days we have been unable to obtain any trucks to load at Cape Town, or engines to remove those loaded, while we are anxious to send forward at least two trains of supplies daily. I have

written an urgent letter on the subject, which, I hope, may make things improve. Everyone is so anxious to send troops to the front that the fact that they will want food when they get there is often lost sight of. Luckily, I have good reserves of food at De Aar and the Orange River Station, but 20,000 men and 10,000 animals soon make a hole in a large supply depot."

"In Natal, there seems to be a mania amongst Army Service Corps officers to become deputy assistant adjutants-general. Directly an Army Service Corps officer is put on the staff an officer to relieve him of his executive work is applied for. We could get on better if half the Army Service Corps staff officers were re-converted into executive officers."

"From a supply point of view, we badly want to be able to use the Midland and Eastern lines of rail; at present, we are only able to use the Western and longest line from Cape Town."

"As Army Service Corps drivers will not be wanted to drive mule or ox wagons, for which work they are quite unfitted, we are posting fifty of them to each Army Service Corps company, where they will be employed at remount work, protecting convoys, etc. The general commanding the Royal Artillery has asked if he may have some as artillery drivers. Others are being attached to the South African Light Horse, and a dozen or so to an officers' hospital at Claremont, so their experience by the end of the war will be varied."

"Lord Methuen's division is being treated very well on its march to Kimberley. A train with fresh bread and meat runs out every day from Orange River Station, where eighty bakers are hard at work. His troops have, besides bacon, cocoa and rum—which I have obtained from the Navy—jams, marmalade, lime-juice and often fresh vegetables, while we keep a depot of ice (six tons) at De Aar to supply the hospitals and the trains bringing down sick and wounded. A wounded man can be given iced champagne and clear soup all the way from the Modder River to Cape Town."

"None of the cigarettes or tobacco reported to have been shipped in the 'Dunvegan Castle' can be found, though the vessel itself arrived long ago. We should be glad of them for the sick and wounded."

"We have a number of Boer prisoners at the docks. I went to see them the other day, and they said they were treated well but wanted some Boer tobacco, which I arranged should be issued. We are to pay the civil prison authorities 1/6 a day for their board and lodging, which is not dear."

"I hear of grumbling amongst the sick and wounded

officers that they are not comfortable in hospital, and arrangements are in progress to hire a convalescent home at Claremont as an officers' hospital, and to arrange with the manager to feed them. I am providing Army Service Corps drivers, who will act as servants to the officers, waiters, etc., without interfering with the work of the regular hospital attendants."

"Cape Town, 13th December, 1899. We are at last getting supplies in satisfactorily, though I would have liked the packages stronger. A large percentage of them are in pieces when they reach the wharf, and not only is the loss of the contents considerable, but the time and labour in making repairs in a crowded store and the consequent confusion, turns the unfortunate Army Service Corps officer into a hard swearer."

"The Italian 'jack' mules, which have recently been landed at Port Elizabeth, are a terror to the country, and a couple of them would stampede any cavalry regiment. They are now being castrated, but, on service, one does not expect to be called upon to perform these surgical operations on hundreds of animals at a time, besides which they will, for some weeks, be able to do nothing except eat up our scanty supply of forage."

"The 'Rapidan' arrived yesterday with glanders on board. She is an unfortunate ship. I hear that not a single article of grooming kit was put on this ship for the use of the Army Service Corps drivers in charge of the horses."

"Colonel Winter, as disembarking officer, Major Wyncoll, as entraining officer, and Major Rawnsley, as deputy assistant adjutant-general here, are all working admirably. There has been hardly a hitch in the landing and railway arrangements, and we have now landed and sent off almost the whole of the Army Corps and Cavalry Division."

"Colonel Christian-Hare is one of the best executive men in the corps. He is baking 20,000lbs. of bread, a day, at the Orange River Station, and Lord Methuen's force at the Modder River has fresh bread, fresh meat, groceries, jams, cheese and ice sent out daily by train."

"I have sent Colonel Johnson to the Orange River Station to see that supplies are thrown into Kimberley directly communications are opened, which we hope will be to-morrow, December 11th, as they ought to be fighting at Spytfontein to-day, and with any luck be in Kimberley to-night or to-morrow."

"The consumption of medical comforts is very large. I fancy the patients do not always get all that is expended."

"Shortly after the fight at Belmont the office here received, to its astonishment, boards in duplicate, with detailed evidence, on three troop horses which had been shot by the

enemy, with a request for authority to strike the dead horses off the regimental animal account."

"The other day a telegram reached us from the front, asking for a million pounds of biscuit, preserved meat and compressed vegetables, to be forwarded immediately. We replied that the General-in-Chief had no intention of feeding troops solely on preserved provisions, even if such large quantities were available, and that substitutes, such as bread, fresh meat and vegetables, should be used. When I receive a huge telegraphic demand for preserved provisions I am now pretty certain we have had an unsuccessful engagement; while, a requisition for large quantities of lime-juice is a sure sign that our troops have suffered a reverse, and that the Army Service Corps officer is afraid railway communication will be interrupted by the enemy."

"Almost the first Army Order published here contained the copy of a letter from the Director-General Army Medical Services, directing the troops to always burn their excreta, and shewing how, with careful management, 160lbs. of fuel would suffice to complete the destruction of 100 men's excreta. When I read this order I trembled for my limited coal supply and drafted another order, which has also been published, to the effect that the troops must themselves collect the 'combustible material,' as the War Office term the fuel required for the purpose indicated, since, under no circumstances, could it be supplied by the Army Service Corps. In this country, without a bush for hundreds of miles, and where one often has nothing but cow-dung to cook one's food with, to be ordered to use good wood and coal for burning excreta does seem somewhat ludicrous."

"I am doing my best to keep large reserves in the advanced depots, but what with demands from Kimberley in anticipation of its relief, from Methuen's force on the western line, and from crowds of volunteers and other troops on the midland and eastern lines, I find I am always running short of stores to send up from the base, where the dock accommodation is insufficient to land supplies and troops at the same time. Just at present, I am unable to bring as many vessels alongside the wharf here to discharge as I could wish, and it is slow work off-loading into lighters."

"From Cape Town alone, I find it necessary to forward fifty truck-loads of food and forage daily, and often more than double this."

"Our reverses are likely to have a serious effect on the supply arrangements, as not only is it difficult to obtain cattle and other local supplies, but our railway communications are frequently interrupted, and for days at a time no supplies of any kind can be forwarded."

"The following characteristic snap-shot of our staff college officer is delicious. I quote from memory:—

"TELEGRAM.

'*From*—Staff officer (recently appointed to an important post on the lines of communication).

'*To*—Chief of Staff

'Please send by next train body servant with camp chair. Horses not required at present.'

"On being shewn this telegram, I decided to increase the reserve of supplies at the post in question by an additional quarter of a million rations, and, within twenty-four hours, communication between it and the army ahead had been interrupted by the enemy."

"Cape Town, 20th December, 1899. I have wired home for more bakers; also, for some steam ovens and dough-making machines. The weather is so hot and our bakers so hard-worked that they are beginning to knock up. The troops must have fresh bread if they are to keep healthy; and as steam ovens and dough machines can be easily taken by rail to our advanced depots and the bread baked sent by rail to the station nearest to the troops, both ovens and dough-making machines are well suited for this country."

"We are now getting out supplies in fairly sufficient quantities, though Natal is giving a deal of trouble by sending supply ships on to Cape Town when they reach Durban, instead of first asking where we want them, and then wiring the next morning for thousands of tons of food, forage, etc."

"I have just had to send a ship back to Port Elizabeth to unload, at a cost of £700 to the public, simply because Natal would not telegraph here for instructions."

"There seem to be two officers in Natal, one, at Durban, sending everything away, and another, with the General of Communications at the advanced depot, demanding immense quantities of supplies."

"The 'Langton Grange,' with 200,000lbs. of meat, which I had intended for Natal, was ordered on here, because, on the bills of lading, the meat was consigned to Cape Town. The day after the ship left Durban a telegram was received from Natal saying that the meat had not been landed. To-day, I received a telegram from the General of Communications in Natal asking for another 500,000lbs. of meat."

"I have not been able to get any supply returns from the eastern line for weeks, and I hear that officers, clerks, bakers

and supplies have been moved about without any reference to either the staff officer of communications or myself. I have written to Colonel Bunbury to look into the matter."

"I hope soon to have bread on the eastern line baked at the advanced depot, and sent forward by train daily to the troops, as we are doing at the Orange River Station and at Naauwpoort, but it is always difficult to get things done exactly as one wants, at a distance."

"I am anxious about Lord Methuen's force, as it is liable to be isolated at any time if the enemy cut the railway. We are sending him six weeks' rations, and he will have to remain where he is, as forty-two days' food for 18,000 men and 6,500 animals cannot be removed or even destroyed in a day."

"I notice many store ships are freighted to Cape Town. They should all be freighted to 'any South African port.' Sometimes we find that stores, notified by cablegram as having been shipped to Natal, are entered on bills of lading as for Cape ports."

"Cape Town, 25th December, 1899. I am now transferred to Sir F. Walker's Staff, as all the headquarters staff have gone to Natal. I have been working on the lines of communication ever since I came out, but my orders were generally given me direct by Sir Redvers."

"So far as supplies go, matters are looking brighter than they have for a long time, and I have no longer to search the horizon for a ship which I hoped would contain supplies, but which generally brought troops, who at once began to eat up the little food I had collected."

"This remount work gives us a lot of trouble. It already uses up nine Army Service Corps officers and five transport companies, which we should otherwise be able to utilise on the lines of communication. The remount establishments sent to South Africa ought to have been stronger, and their position more clearly defined. At present, the Army Service Corps have to officer and man them entirely, with the assistance of a few cavalry officers, who are constantly endeavouring to bolt off to the front."

"Just now, we seem to have more mules than we know what to do with, as nearly all our transport work is done by the railway, and the troops are seldom more than a few thousand yards from rail-head."

"I have arranged to put up a certain number of convalescent officers, for 15/- a day, at the Mount Nelson Hotel. This is considered a great boon by wounded officers, who pick up very quickly there."

"I am trying to smuggle some cattle into Kimberley, but I am not at all confident of success. I have refused to pay

anything unless I get receipts from Kekewich, when I am to pay £27, per head, for each ox which gets through. This ought to be a good bribe. I have not yet heard whether my attempt to revictual Mafeking has been successful, but I am very doubtful as to the result."

"I have a dozen Army Service Corps officers on the sick list, most of them with dysentery, the result, I fancy, of the reaction after their hard work during the recent fighting."

"I hear that wagons and supplies are being built into the defences at some of our advanced posts. How history repeats itself. In the Zulu war this was often done, with the result that the wagons soon became useless, while the supplies rotted."

"Cape Town, 1st January, 1900. At the Modder River they have been selling flour, groceries, etc., to local Boers, who may, perhaps, be fighting against us to-morrow. I shall no doubt soon have a certificate from Cronje praising the Woolwich supplies but complaining of the locally-manufactured jam."

"I have sent to the War Office by this mail a communication regarding the shipping of supplies. The authorities at home sometimes put all our tea or sugar on a transport with troops who are to go to Natal, so that the tea or sugar takes weeks before we can land it where we want it."

"I am having a rumpus about the docks here. Dozens of ships are detained at Cape Town incurring heavy charges for demurrage because the local authorities will not allow them to have precedence over British or foreign ships landing goods for the general public. As Sir Edward Chichester, the Naval Transport Officer, says: 'One might as well be in a foreign port.' I have written a memorandum on the subject, and the matter will, I trust, be represented by the General to the High Commissioner."

"I have also sent home a correspondence about the Boer supplies we have seized on the railway. It seems rather absurd that we should pay for supplies consigned to the Transvaal and Free State and which we have requisitioned or commandeered on the railways in the Cape Colony, while the Boers are commandeering supplies and stores from British subjects in the Free State and Transvaal, without any payment at all."

"I fancy the accounts of the local volunteer and irregular corps will be a source of future trouble. I hear that camp equipment and bedsteads for the officers, also typewriters for the clerks, have been purchased and paid for by regimental paymasters appointed to the corps, which have their chaplains—sometimes a bishop—transport officers, quarter-

masters, medical officers, and veterinary surgeons, all drawing high rates of pay and allowances."

"It seems a pity the War Office did not send out a financial adviser to the General of Communications long ago, but it is none of my business, though, having been consulted as to how the local corps should be paid, I have been a bit behind the scenes. I have strongly recommended that Army Book 41, which we use for our native drivers, should be used for paying volunteers and irregular corps."

"Until Lord Roberts arrives I feel rather handicapped, as I do not know where the troops will go or what supplies to fill up my depots with."

"It will be impossible for the railway to take up troops, transport animals and vehicles, and supplies at the same time, so I am now sending off seventy and eighty—sometimes over a hundred—trucks of food and forage daily to De Aar and Orange River Station."

"The cavalry regiments and transport 'shout' for a larger ration of forage than we are issuing, but I have so far been able to induce the General of Communications to refuse any increase, as the railway can only take a limited number of tons daily, and we can calculate, almost to a pound, what number of men and animals can be fed at the front with our single line. Naturally, one is fearfully abused, but I cannot feed one General's force at the expense of another's."

"I have nothing now to do with wheeled transport, but I am sorry to see so much mule transport used instead of ox transport, which can feed itself by grazing; whereas, for each mule, some 16lbs. of forage is demanded daily, and even this is considered too little. With more than twenty times the force to feed and forage, we are issuing double the forage ration we used to give in Bechuanaland, in 1885. Each horse and mule will, on an average, require not less than 10lbs. grain and 10lbs. hay as soon as the dry season sets in, which, however, will not be for another couple of months."

"Misfortunes never come singly, and in the Cape Colony we have, besides the war, an unprecedented drought and rust in the forage crop."

"A driver of the Army Service Corps has been awarded a dozen lashes on board the 'Mount Royal,' the ship which brought out the 'jack' mules, and both crime and punishment are entered on the man's defaulter sheet. This extraordinary treatment of a soldier proceeding on active service by an officer of another corps would cause any amount of comment if it got into the papers. It is a pity these irregular experiments should be made on the Army Service Corps. The matter has been reported to the proper authorities, and I trust serious notice will be taken of it."

"I have extracted the following from the unofficial report of an officer I had sent to inspect along the line of communications :—

Scene.—A supply depot on the veldt.

Dramatis personæ.—An Army Service Corps subaltern, with a section of bakers, engaged in constructing a field bakery on the latest Aldershot pattern.

[*Enter GENERAL.*]

GENERAL : What are you doing here ?

SUBALTERN (*saluting*) : Constructing a field bakery, sir.

GENERAL : Then you are doing it all wrong.

[The General proceeds to teach the section how a field bakery ought to be constructed. After marking out the ground with pegs, he places bakers armed with picks and shovels opposite each other, ordering no one to move till he gives the order, and then only the two men nearest to him.]

GENERAL : Now you may commence !

[Of the two bakers, who both keep their eyes fixed on the General, the one with a shovel stoops down and begins to dig, the other with a pick raises it over his shoulder, and, bringing it down smartly, strikes on the head the man with a shovel, who falls insensible. The remaining bakers obtain a stretcher from the nearest ambulance and convey the injured man to the hospital tent, while the construction of the field bakery is postponed *sine die*.]

"Cape Town, 7th January, 1900. Having been on the verge of starvation we are now threatened with a plethora of foodstuffs, often more than we can deal with, but it is better perhaps to have too much than too little."

"I have been stopping, or trying to stop, over-issues and waste. When one General sells or gives away quantities of food to Boers and then complains he has insufficient for his own troops ; when another builds supplies and wagons into his defences ; when one Colonel doubles the grocery ration at his station without troubling to see how long his supplies will last, and without reporting what he has done ; when another draws bread in the morning for his battalion, leaves it out in the open during a thunderstorm to spoil, and then demands and obtains a second issue in the afternoon, it is almost time to put one's foot down."

"Every general complains of having such junior Army Service Corps officers on the staff of divisions. I think it will be admitted after this war is over that each division should have an assistant-adjutant-general with one or more officers to help him. Junior officers, however energetic, often lack the necessary experience, and are inclined either to refer everything to higher authority or else to accept without demur any order to increase rations, no matter how it affects other stations."

"I have done some good worrying the dock people here, and the Naval transport officer tells me he has a much easier billet now that our transport and freight ships have been given priority of berthing."

"Tons of hay arrived here the other day in the 'Hylas,' which had evidently been thrown into the hold quite loose. The 'Vine Branch' has just arrived from Australia with bales of oat hay weighing from 5 to 7 cwt. These bales are so unwieldy that we cannot deal with them. Some preserved meat from England also arrived in the 'Hylas.' The cases were all in pieces, and the meat is, therefore, useless for sending up country and can only be used for issues at the base."

"I am sending home a correspondence relating to claims for compensation by colonists here, who seem to think that if their neighbours fight against us one day and we have to shell their farms and capture their stock we ought to compensate them the next. General Sir F. Forestier-Walker has definitely refused to have anything to do with such claims, excepting those for damage actually caused by our troops at stations far removed from the scene of operations."

"Notices have been published by various general officers telling people that if they remain quiet they will be compensated for any damage caused; but it should, I think, be made quite clear that the Imperial Government does not bind itself to pay them any compensation."

"Our Xmas present of 10,000 plum puddings unfortunately went on to Natal, where four-fifths of them were annexed. However, all is fair in love and war."

"Bridge now wants more Army Service Corps drivers as grooms for the remount depots, and the Army Service Corps is rapidly becoming a vast remount establishment. Why cannot a few hundred Indians, properly organised, be sent as grooms for the remounts? They would be far cheaper and twice as useful as Army Service Corps drivers, to command whom I have no officers to spare. As it is, I almost daily get telegrams from the various general officers commanding divisions demanding an extra officer or a couple of clerks, and the only way I manage to stop the correspondence is by

replying that I must shortly take away one or two of those they already have."

"Captain Edmondson, the quartermaster at the Cape Town docks, is worth his weight in gold ; he has kept everything in apple-pie order, while horse, foot, and artillery, with thousands of remounts and mules, are picketed in or marched through his stores."

CHAPTER VII.

The Arrival of Lord Roberts and the Reorganisation of the Regimental Transport and Remount Services.

Lord Roberts reached Cape Town on the 12th January, with Lord Kitchener as Chief of his Staff; and large reinforcements having been landed, arrangements were made for an advance into the Free State.

With the exception of ammunition carts, water-carts, pack animals and technical vehicles, Lord Roberts decided to withdraw all regimental transport from units, to organise it as general army transport and place it under the Army Service Corps. Fourteen Army Service Corps companies were accordingly formed into 28 mule transport companies, each comprising 49 buck wagons, 4 Scotch carts and a water-cart.

On the 20th January, these companies were distributed as follows :—

<i>Modder River.</i>	{	19th Coy. Army Service Corps	{ A Transport Coy.		
		20th Coy. " "	{ B " "		
			{ C " "		
		36th Coy. " "	{ D " "		
<i>De Aar.</i>	{		{ E " "		
			{ F " "		
		10th Coy. " "	{ G " "		
			{ H " "		
		11th Coy. " "	{ I " "		
			{ J " "		
		21st Coy. " "	{ K " "		
			{ L " "		
<i>Naauw-poort.</i>	{	26th Coy. " "	{ M " "		
			{ N " "		
		28th Coy. " "	{ O " "		
			{ P " "		
		7th Coy. " "	{ Q " "		
			{ R " "		
	{	13th Coy. " "	{ S " "		
			{ T " "		

<i>Cape Town.</i>	{ 9th Coy. Army Service Corps	{ U Transport Coy.
		V " "
<i>Stellenbosch.</i>	{ 15th Coy. " "	{ W " "
		X " "
<i>Queens-town.</i>	{ 42nd Coy. " "	{ Y " "
		Z " "
<i>Sterkstroom.</i>	{ 30th Coy. " "	{ AA " "
		BB " "

A few of the companies were not fully completed with mules and vehicles till some weeks later.

Meanwhile, the ox transport hired in the Cape Colony, which had hitherto been kept south of the Orange River, was organised into companies of 100 wagons each, and moved to the depot at the Orange River, where they were loaded with provisions and forage to form a supply park.

The road bridge over the Orange River at Hopetown having been destroyed by our troops some weeks previously, considerable difficulty and delay was experienced in getting many hundreds of heavily-laden vehicles across the river by the railway bridge at the same time as troop trains were passing through to the front, and several accidents occurred.

Until sufficient mounted troops were available to guard them, the transport cattle continued to be grazed south of the Orange River, but the wagons were, when loaded, parked on the right bank of the river.

Considerable divergence of opinion exists as to the best organisation for a transport service in South Africa.

Before the campaign commenced, the War Office authorities had decided that each unit, mobilised for active service, should be equipped with a complete regimental mule transport.

For a single infantry battalion this transport comprised:—

- 1 Officer.
- 1 Non-commissioned officer.
- 1 Conductor (civil).
- 30 Native drivers.
- 10 Privates, as drivers.
- 7 " as wagonmen.
- 2 Riding horses.
- 11 Draught mules.
- 9 Pack mules.
- 12 Spare mules.
- 15 Vehicles (including a machine-gun).

In the above, no transport for the conveyance of camp equipment was provided for.

By each soldier, a total weight of over 56lbs. was carried, yet, only 369 rounds of small arm ammunition per man, with 4,000 rounds for the machine-gun, and three and a half days' rations could be carried with a battalion, and to do this the men had to carry and the mules to pull very heavy loads.

Such an organisation proved both extravagant and dangerous: extravagant, because the transport was perforce idle when the unit to which it belonged was stationary, and dangerous, owing to the length of the baggage column which such a system entailed. Moreover, regimental transport animals are, as a rule, indifferently fed, while the wagons they draw are usually overloaded.

Again, it is a debatable question whether mule or ox draught should have been selected for the 'first' and 'second' lines of transport of the Army.

While mule wagons can travel in South Africa with greater rapidity than ox transport, they carry much lighter loads, they require to be fed daily with a grain and often with a hay ration: which, if it has to be carried, still further lightens the load; they are comparatively useless over heavy ground in wet weather, and the services of teams of oxen are consequently required to help them over a bad piece of road or across a steep drift.

Oxen, on the other hand, though moving at only half the pace of mules, can carry double the load. During the summer months, when there is usually some grazing, they will keep their condition on grass alone; while owing to their strength, they can be relied upon to bring their wagons safely through the heaviest ground and across the steepest drift. They are easily herded, and not readily stampeded.

For the reasons given, a lightly-loaded mule transport is very suitable for working with mounted troops moving rapidly in front of the main army, while ox transport appears to be admirably adapted to accompany infantry on long marches.

Mule and ox transport should not, under any circumstances, travel together in any numbers along the same road at the same time; as, while mule wagons move at a speed of four to six miles, the pace of an ox wagon seldom exceeds two and a half miles, an hour. In a mixed convoy, mule transport should, therefore, invariably precede ox transport.

Whether ox or mule transport is employed, it should be formed into small sections of ten or twelve wagons, and organised as general army transport. In practice, it was found impossible to keep together the large sections and companies which were formed when Lord Roberts arrived.

Early in February, the supply arrangements were as follows :—

Rhodesia.—Colonel Plumer was moving southwards towards Mafeking, his force being supplied by the Buluwayo-Salisbury-Beira route.

Mafeking.—Two months' supplies were available for all Europeans (including 1,074 men, 230 women and 400 children), but, both whites and natives (some 7,500) were on reduced rations, being partly fed on horseflesh and on porridge made from oat husks.

Kimberley.—A full month's rations were available for a population estimated at 25,000 Europeans (men, women and children) and over 13,000 natives. The civil population was, however, on short rations, horseflesh being issued as the meat ration.

Modder River.—Sixty days' rations for 20,000 men and 7,000 animals had been collected at this station. Fresh bread and meat continued to be received daily from the depot at Orange River Station.

Stations between the Orange and Modder Rivers.—Depots had been formed, at Witteputs, of ten days' supplies for 300 men; at Belmont, of ten days' for 4,000 men and 1,500 horses; at Graspan, of ten days' for 6,000 men and 500 horses; at Enslin, of ten days' for 1,000 and 500 horses; and at Honeynest Kloof, of ten days' for 3,000 men and 1,500 horses.

Orange River.—Reserves of 1,500,000 soldiers' rations and 1,000,000 forage rations were collected at this depot.

De Aar.—Reserves of 2,000,000 soldiers' rations and 1,000,000 forage rations were collected at this depot.

Port Elizabeth-Naauwpoort-Arundel line.—Reserves of 2,000,000 soldiers' rations and 1,500,000 forage rations were maintained along this line.

East London-Queenstown-Sterkstroom line.—Reserves of 1,500,000 soldiers' rations and 750,000 forage rations were maintained along this line.

Ladysmith.—Over a months' rations of provisions, but on a reduced scale, were still available. Forage was, almost entirely, expended. For meat, the garrison was subsisting principally on horseflesh. The limited food supply was being carefully husbanded under the able supervision of Colonel Ward.

Durban-Maritzburg-Colenso line.—Three months' supplies were in store or expected to arrive for a force (including the Ladysmith garrison) of 55,000 men and 21,000 animals.

The organisation of the Remount Service at the commencement of the campaign was far from satisfactory.

No remount companies had been despatched to South Africa. The entire personnel consisted of Colonel Stevenson, Assistant-Inspector of Remounts, in Natal, and Major Birkbeck, at Cape Town, with two or three officers and a few cavalry and Army Service Corps non-commissioned officers, as assistants.

As a result, when many thousands of horses and mules began to arrive at the four South African ports it became necessary to detail nine Army Service Corps officers and five transport companies solely for remount duty.

As these officers and companies were urgently required for transport work on the lines of communications, a heavy additional strain was thrown upon the transport service, which for a time virtually became a vast remount establishment.

The Army Service Corps were quite prepared to take over and train for transport work the transport mules, as they arrived, but it was impossible for the corps, with its limited establishment, to look after the cavalry and artillery remounts and to supply personnel for the various sick horse depots, as well.

When Lord Roberts arrived the matter was brought to his notice, and a number of special service officers were detailed to relieve the Army Service Corps officers, while the authorities in India were requested to send with as little delay as possible a native remount establishment, which, on its arrival, relieved the transport companies.

The system of purchasing animals in the South African colonies was faulty. In addition to the agents of the remount department, the locally-raised colonial troops were allowed to purchase their own horses, while arrangements had been

made in London with Mr. Abe Bailey to purchase horses for the City Imperial Volunteers, and with Mr. Weil for the Imperial Yeomanry. Again, when the Duke of Cambridge's Yeomanry arrived, one of their officers was deputed to purchase remounts direct, so that at times there were some half-a-dozen purchasing agents bidding against one another in the same market. Prices, consequently, rose abnormally. Had, as was recommended in October, 1899, an Impressment Act been put in force at the outbreak of hostilities, and horses and mules commandeered, on payment, at fair prices through the intervention of the civil authorities, a very considerable number of suitable and acclimatised animals could have been obtained, and it might have been possible, during the earlier stages of the war, to have given imported animals a few days' rest before they left the coast. As it turned out, horses had often to be entrained at the docks directly they left the ship, and the consequent losses in horseflesh were very considerable.

In several of the vessels which brought horses and mules to South Africa, there were no arrangements by which animals could be walked from one deck to another, while, in others, there were no ports large enough for them to pass through. Consequently, they had to be slung ashore one at a time. This, when dock space was so valuable, resulted in considerable delay and inconvenience.

In making contracts for the purchase of remounts, and especially of draught animals, it is recommended that limits of age, height, weight, girth measurement and measurement below the knee be fixed; also, that the arrangements for shipping the animals and for feeding them during the voyage should be supervised by an Army Service Corps officer.

Freight should be taken up at so much a head for each animal landed at the port of disembarkation, while a small grant might be paid to the master of the vessel for each animal certified by the disembarkation officers to have been landed in good condition. The forage supplied for the animals during the voyage should also be very carefully examined at the port of embarkation.

Extracts from Diary.—"Cape Town, 15th January, 1900. Our new Commander-in-Chief has arrived, and his staff are settling down to work."

"There seems to have been an impression at home that Methuen's troops have been unable to move for want of transport. I explained to Lord Roberts that this was quite a mistake."

"After the reverse at Magersfontein, Methuen was directed by Sir Redvers Buller to retire to the Orange River if he could not relieve Kimberley. Lord Methuen decided that he was not strong enough to relieve Kimberley without reinforcements, but it was represented that if he left Modder River the Boers from Magersfontein would probably augment the forces against which French and Gatacre were operating. It was, therefore, decided that Lord Methuen's force should remain at the Modder until reinforced by Sir C. Warren's Division. Meantime, the reverse at Colenso occurred and Warren's Division was sent to Natal instead of to the Modder, and Lord Methuen then asked for sixty days' reserve provisions in case his communications might be cut. As his force was to sit still and do little or nothing, I pointed out that his enormous mule train might as well return to Orange River, or at any rate the greater part of it, until it was again required. Lord Methuen, however, decided to keep his transport train, consisting of some 4,500 mules, with him, so I had to lay in two months' reserve rations for those animals, besides the food for troops and horses. The total must have amounted to some 6,000 or 7,000 tons, and this accumulation of supplies has of course necessitated Lord Methuen's force remaining stationary at the Modder River while some 3,000 to 4,000 troops have been required to guard his communications with the Orange River."

"The following is the correspondence which took place at the time :—

'From General Commanding-in-Chief, Frere Camp, to General, Cape Town :—

'Tell Methuen to fill up with good provisions, especially forage, and arrange to hang on six weeks at Modder River.'

'16/12/99.'

'Chief of Staff :—

'Please see telegram to Orange River to fill up to forty-two days' reserve.

'If Lord Methuen could graze his mules he could economise his forage a great deal. Would you ask him about this? I hear the grass is good.'

'(Signed) W. D. RICHARDSON, Colonel.

17/12/99.'

‘From Chief of Staff, Cape Town, to Lord Methuen, Modder River :—

‘Adhere strictly to authorised scale of rations for men and animals, and economise forage by grazing mules when possible.’

‘17/12/99.’

“The Chief of Staff wired to General Officer Commanding at Modder River on the 18th December, asking him whether, as his force would be stationary for some weeks, he could not send some of his mules back, and thus relieve the pressure on the railway from Orange River and De Aar, from which places some 4,000 tons of reserve forage would have to be sent, besides the sixty days’ reserve provisions for the troops and the daily rations for man and horse.”

‘From Methuen, Modder River, to Chief of Staff, Cape Town :—

‘It is in my opinion not advisable to send back any of my transport animals to a supply depot; the transport may be required at any moment.’

‘18/12/99.’

‘From Methuen to Chief of Staff :—

‘As it is possible I may be cut off from my communications, and should provide for contingencies, I consider forty-five days’ reserve stores should be sent here immediately; and, on completion, it should be carefully considered whether reserve stores should not be increased to twice thirty days.’

‘18/12/99.’

‘From Director of Supplies to Chief of Staff :—

‘If you think sixty days’ food should be sent, there will be no difficulty if railway keeps open.’

‘19/12/99.’

‘From Director of Supplies to Lord Methuen, Modder River :—

‘Yours of 18th inst. General approves of another eighteen days.’

‘21/12/99.’

"Lord Methuen's mules have lately fallen off in condition, as the grazing of so many animals has completely exhausted the grass near the Modder, and I still believe it would have been better to have sent his transport back.

"It is ludicrous, however, for anyone to think that Lord Methuen's force has ever been short of transport, and, I fancy, he himself would be the last person to say so. On the contrary, he had apparently more than he wanted as he left some of his regimental transport animals and vehicles south of the Orange River when he advanced, as his baggage column was too long, and he preferred, no doubt, to trust to the railway for the conveyance of his supplies, etc."

"Lord Roberts has now decided to abolish regimental transport entirely, and, beginning at the Modder River, to organise the transport into sections, companies, etc. Forty special service officers who are coming out are to be placed in charge of the transport, with possibly a general at their head. While I entirely agree with the abolition of regimental transport, as such; still, if officers from every regiment in the service are suddenly to be brought out and put over the heads of Army Service Corps officers who have been working like slaves, and who have had nothing but praise for the way in which the supply and transport services have been 'run' by them, there will be a very general feeling amongst both officers and men that, while they are doing and have done all the hard work, outsiders will come in and get all the credit."

"By suddenly having all the regimental transport handed over to the Army Service Corps without the regimental transport officers, we virtually lose the services of thirty or forty officers, whose work will fall upon the Army Service Corps, as none of the special service men have so far arrived."

"Lord Roberts was good enough to express his entire satisfaction with the supply and transport arrangements which had been made by the Army Service Corps, up to date."

"I have just received a correspondence with the station-master at Belmont, who retired to a safe spot during the fight there, and on his return found troops occupying his house. He now puts in a claim of £70 odd for watches, etc., which he alleges our troops made away with. He includes in his bill his wife's nightdresses at a guinea apiece, also the baby's diapers—'two dozen of the best quality'—at 10d. each. So far I have not been ordered to pay this claim."

"Another man puts in a claim for £970, because 800 mules broke into his land one night and ate some oat hay which had just been cut. I have not paid this claim either. The claimant is the brother-in-law of the man from whom we hired the grazing farm."

"I have been trying to get the Royal Engineers to build us brick ovens at the advanced depots, but as they send out specifications and get in tenders from contractors at Cape Town, the construction of the ovens has not yet been begun at the Orange River Station or at Naauwpoort, and our bakers are doing double the work necessary, in consequence."

"I shall be glad to see some steam ovens. I have taken on twenty-five civilian bakers, and am sending them up country."

"I have appointed Major Webb, D.A.A.G. to General Kelly-Kenny, who said he must have an Army Service Corps staff officer. I shall be delighted to see some more officers. I have to send Clayton to organise transport on the new system at Modder River, and Johnson to the midland line. It is better to let regimental officers act for Army Service Corps officers, at home, than for me to try and pick up stray officers out here, who all hate the work and want to be in the fighting line."

"Cape Town, 16th January. The new scheme of transport has been drawn up by Bridge and Clayton, and approved of by the Commander-in-Chief, and I hope we may be allowed to run our transport ourselves."

"I would beg to be left at home if I was ever ordered on another campaign with only captains or majors as the Army Service Corps staff officers of divisions. Officers of senior rank are required for these billets on service, and a junior, though perhaps more energetic, has seldom the experience or the grey hairs necessary to enable him to get the best of an argument."

"We have for weeks been supplying 40,000 men by a single line of 3ft. 6in. gauge and 550 miles in length, but I much doubt whether we could do as much along all three lines in the Cape Colony without breaking down. The maximum tonnage the railway can carry for us daily is about a thousand tons weight."

"I calculate that each thousand men require three tons of supplies daily, including fuel for baking bread and cooking, tare weight of bags and cases, and allowance for waste; while every hundred animals require a ton of forage daily."

"One can, therefore, calculate to a nicety, by adding 15 per cent. to the number of troops for camp followers, what total number of men and animals we can feed. But we cannot send up troops to rail-head without a reserve of supplies. This reserve must be deducted from the daily supply, and virtually reduces it by about one-half. If, therefore, too many troops are sent up before a reserve can be collected they or their horses must starve."

"I do hate this mule transport: the mules eat so much, while they cannot march with infantry, as they are too fast on the flat and too slow over the hills: further, they cannot carry half the load oxen can."

"If you march mule transport at the rate of two and a half miles an hour behind troops, the mules soon tire and 'jack up.' It is the number of hours in harness rather than the actual distance travelled which knocks them up."

"So far, we have only used our ox transport, of which we now have over 1,000 wagons available, on the eastern line and in Natal."

"I hear of the ox transport of one brigade in Natal being kept in the yoke for over thirty-six hours. This is, of course, fatal to efficiency, as the only way of feeding oxen is to graze them, which cannot be done while they are in the yoke."

"I suppose we shall learn by experience how to manage both mule and ox transport in this country. I have served so long in South Africa myself that it makes me wild to hear of the stupidity shewn by officers and men in these trivial matters."

"The supply depots are short of tarpaulins and sail covers. To cover 100,000 tons of supplies you want sail covers by the tens of thousands, and not by hundreds. I am worrying the Army Ordnance Department to get more sent out."

"Cape Town, 24th January, 1900. The transport question has now been settled, but regiments will, of course, grumble at losing their regimental carts and wagons."

"Lord Roberts has told me that as I am the senior officer belonging to the Army Service Corps out here he is going to place a number of special service officers under my orders for transport work, and that I am again to be Director of both Supplies and Transport."

"Eighteen officers, including Colonels Barker, R.E. and Benson (as assistant adjutants-general), Majors Count Gleichen (as deputy assistant-adjutant-general), Maxse, Coldstream Guards, Vandeleur, Scots Guards, and Johnson, R.A., with many captains and subalterns have already been posted as transport officers."

"We are forming each Army Service Corps company into two transport mule companies. These transport companies will be numbered A, B, C, and so on, and will consist of four sections of twelve wagons each. The major or captain commanding the Army Service Corps company will command the right transport company, and his senior subaltern will assist one of the attached officers who, if the senior, will command the left transport company of the Army Service Corps company."

"Personally, I have always been in favour of a sectional army transport organisation as opposed to regimental transport, which is, to my mind, very wasteful : but it is rather a large order changing everything in the middle of a war."

"I have asked that the Army Service Corps may be relieved of the remount business, which, like the old man of the sea, has hung round our necks and used up several Army Service Corps companies, and any number of officers who are badly wanted elsewhere."

"The flour sent out—at least the first consignment of it, ex steamer 'McNab'—is in bags which are so full of holes that I have had to buy corn sacks to put over the other sacks. This wastes flour, time and money."

"So far, we seem to be getting out too much hay and too little grain. We do not, at present, want more than four months' hay and grain—three months' in our depots, and a month on ships in the harbour or on its way up country by train."

"Those Italian mules are brutes. They will not eat their corn and hay, and keep losing condition as they have not yet become acclimatised and, besides, we have had to castrate the majority of them, which will render them useless for a month at least."

"I hope to have an opportunity of going up country with Lord Roberts and seeing how things 'gee' in the next fight. I badly want a change of air after having spent so many 'half-hours with the best authors' of official correspondence, at Cape Town."

"Cape Town, 30th January, 1900. They are sending me every officer they can spare for transport work, some, I fear, that they are anxious to get rid of; but, as they have taken away nearly all the regimental transport officers—some forty or fifty—the actual result is that our transport personnel is a bit to the bad."

"I am sending Colonels Bunbury and Johnson up the Western line to see after transport and supplies respectively, and I hope myself to go up shortly with Lord Roberts, but I cannot stop away from Cape Town for long, as the work here must always keep my nose to the grindstone."

"We want more sail covers, also steam ovens, badly. So far, we have lost very few stores by the wet, but a lot have been pilfered in the trains, as well as a number of the parcels sent out for the troops."

"It is whispered that a senior officer, recently attached to the transport, has ordered the 'trek' oxen to be 'inspanned' and exercised in their wagons for at least two hours daily!"

CHAPTER VIII.

The March to Bloemfontein.

On the 12th of February, Lord Roberts advanced into the Free State, from Enslin, with a force consisting of some 35,000 troops, 20,000 horses and mules, and over 1,400 ox and mule wagons.

In addition to two days' supplies carried on the men, and two days' in the brigade transport, a supply park of 200 ox wagons, carrying over 600 tons of provisions and forage, also 500 slaughter cattle, accompanied the force.

The total quantity of supplies carried by the park was 200,000 soldiers' rations and some 50,000 forage rations, with a due proportion of medical comforts.

Another 400 ox wagons, carrying double the above quantities, were being loaded as rapidly as possible at the Orange River depot and pushed northwards towards Enslin and Honeynest Kloof, to follow the army and replenish the supply park, as the first 200 wagons were emptied. Owing, however, to the absence of water and grass, and to the intense heat, their progress was necessarily a very slow one.

Being provided, unfortunately, with an insufficient escort, the supply park which followed in rear of the army was captured by the enemy at Waterval Drift on the Riet River, and the only foodstuffs left available were those carried in the brigade mule transport and by the troops themselves.

Lord Roberts immediately gave orders that the troops were to continue their march on half-rations of breadstuffs and groceries; but, to compensate for this reduction, the fresh meat ration was increased to $1\frac{1}{2}$ lbs.

At the same time, orders were sent to Kimberley, which General French had relieved on the 15th, to Lord Methuen at the Modder River, and to the depot at the Orange River, to hurry forward all available vehicles loaded with supplies to replace those captured: and, before midnight on the day the

army reached Jacobsdaal, over 100 wagons loaded with supplies had joined it. So rapid, however, was Lord Roberts' advance, that the Army Service Corps were never able to make up for the supplies lost with the captured convoy, until Bloemfontein was reached on the 13th March, and the railway could again be used as the chief means of conveyance.

On reaching Jacobsdaal, Lord Roberts decided it was impossible for a single officer to efficiently supervise both the transport and supply departments, and Colonel Sir William Nicholson, his military secretary, was appointed director of transport, with Major Furze, D.A.A.G., as his assistant. I had originally intended to place Colonel Bunbury in charge of the transport service with the force, but, owing to the paucity of senior Army Service Corps officers I was compelled to leave him at the Modder River to ensure that the supplies, so urgently needed, were hurried forward.

For the same reason, Colonel Johnson had to be sent back to Kimberley, and my staff was, consequently, reduced to a quartermaster, who acted as my secretary; thus, I was unable to exercise as much personal supervision over the widely distributed and lately organised transport as I could have desired.

The troops suffered considerable privation during this historic march, and remained on half-rations of biscuits and groceries until the 26th February, when it became possible to increase the ration of biscuit to $\frac{3}{4}$ lb. daily; but, owing to the weather, which had changed from extreme heat to heavy rain, rendering the roads almost impassable, it was found impracticable to bring up sufficient forage to issue a daily ration of more than 8 lbs. of grain to the cavalry and artillery horses and 6 lbs. to the mules.

On reaching Bloemfontein all supplies in the town were requisitioned, on payment, at fair rates, and both men and animals were once more placed on full rations. Nearly a month's supplies for the entire force were obtained in Bloemfontein.

In Natal, Ladysmith was relieved by Sir Redvers Buller on the 1st March, while railway communication between the Orange Free State and the Cape Colony was rapidly restored; and, by the second week in April, supplies, forwarded by train, were able to reach Bloemfontein from the coast.

Having made all possible arrangements for the local supply of the troops in the Free State, I was now anxious to return to Cape Town, from which station I had been absent for over seven weeks, in order to hurry forward the much-needed supplies, as soon as through railway communication could be established between Bloemfontein and the coast. Lord Roberts had already sent to Natal for Colonel Ward,

whom the relief of Ladysmith had set free, and on that officer's arrival the following order was published :—

"Headquarters, Bloemfontein.

" 22nd March, 1900.

" Colonel W. D. Richardson, C.B., will proceed to Cape Town and resume his duties of Director of Supplies and Transport on the lines of communication.

" During Colonel Richardson's absence Colonel E. W. D. Ward, C.B., will perform the duties of Director of Supplies at Army Headquarters.

" By order,

(Signed) "W. F. KELLY, Major-General,

"For Chief of Staff."

Leaving Bloemfontein on the 23rd, I reached Cape Town on the 25th March, travelling down through the Free State *via* Norvals Pont.

The occupation of Bloemfontein had caused the enemy's forces operating in the Cape Colony to make a hasty retreat across the Orange River, destroying the railway bridges at Norvals Pont and Bethulie as they retired. A pontoon bridge was thrown by the Royal Engineers across the river at Norvals Pont, over which a considerable quantity of supplies and stores were taken by General Clement's force, which advanced to Springfontein; while General Gatacre's force crossed the river by the road-bridge at Bethulie, which was reached just in time to save it from destruction.

During April, the engineers repaired an old contractor's bridge at Norvals Pont, and rails having been laid across this bridge, as well as over the road-bridge at Bethulie, it became possible to send supply trains through to Bloemfontein from all three Cape ports.

Extracts from Diary.—" Bloemfontein, 21st March, 1900. I left Cape Town on February 6th. Headquarters went by rail to Modder River, where the heat and dust were terrific, and where my two horses were lost within an hour after they had been detrained, my groom having stupidly left them tied up at the station. Luckily, they were recovered two days afterwards."

" How Methuen's force managed to remain at Modder River so long and with so little sickness was a puzzle to everyone, as the Boers threw their dead horses, cattle and offal

into the river and the dust which blew in clouds every afternoon consisted principally of particles of horse and cow dung and every other conceivable kind of filth."

"On February 12th, Headquarters went by rail to Enslin Station, and from there we began our march into the Free State, the cavalry having gone on ahead the day before."

"As regards supplies, I took 200 ox wagons, 100 of these loaded with 200,000 soldiers' rations and the other 100 with 50,000 forage rations. In addition, each man carried two days' biscuit and groceries, and an emergency ration on his person, and the brigade and divisional transport (mules) carried two days' rations of everything—biscuit, preserved meat, groceries, forage, etc. We also drove 500 head of cattle with us, so that we started with from eleven to twelve days' rations for men and five or six for horses and mules, of which latter we marched with over 10,000."

"From Enslin we marched, *via* Ramdam, to de Kiels drift on the Reit River, which had been captured by the cavalry after a short fight. The transport had a rough time crossing this drift, as the weather was hot, the river banks steep, and the animals tired. After the first 100 wagons had crossed, the sand was axle-deep, and it took two and often three teams to pull each wagon up the bank. We managed to get all the wagons of the cavalry and Tucker's divisions across during the night, and we sent the rest of the wagons and the supply park to Waterval drift, four miles away, where, though the drift was if anything worse than the other, we were at any rate able to have two lots of wagons crossing at the two drifts at the same time."

"The next day (February 14th), Headquarters came round to Waterval drift, where we were still getting wagons across with the help of the oxen belonging to the supply park, and, by midnight (the 14th), all the divisional transport was across and most of the supply park, but the oxen of the latter were so done up that we could not move the park until the evening of the 15th—4 p.m. was the hour fixed upon. The remainder of the troops marched off at 4 a.m. on the 15th, leaving only a small—too small as it turned out—escort to come on with the supply park. I had on several occasions drawn attention to the danger of sending large numbers of wagons in rear of the troops with little or no escort, and I had laughingly remarked to our D.A.G. the previous evening that if the unfortunate supply park had always to march *en l'air*, some day we should lose it."

"The cavalry had already been sent across the Modder River, and Kelly-Kenny's division followed to catch up Cronje, who was reported to be retreating along that river. Meantime, Headquarters marched to Wegdraai drift and from

thence to Jacobsdaal, which surrendered after a slight opposition. About mid-day, we heard that the supply park had been attacked at daylight, about two hours after we had left, and Tucker was sent back with two battalions and a battery to get the convoy through, but late at night we got a message that more troops were wanted, and that the native drivers had bolted. It was then decided to leave the convoy to its fate, as if more troops were sent back the pursuit of Cronje might be delayed."

"Imagine my feelings when I found I was to lose 150,000 soldiers' rations, about 30,000 forage rations and nearly 200 wagons; but there was no help for it. The troops still had two days' rations, so by putting them on half-rations we made these last four days, and issued 1½ lbs. of meat a day as some set-off for the reduced breadstuffs. At the same time we wired to Modder River and Kimberley to send out at once every vehicle they could get hold of loaded up with supplies. Even the ambulances were requisitioned for the purpose, and in this way we got another two or three days' food when we reached Jacobsdaal."

"A convoy of 100 ox wagons with supplies was also hurried through from Honeynest Kloof to Jacobsdaal, and these were sent across the Modder River to feed the cavalry and Kelly-Kenny's division, which were in front and running short of food. On February 19th, Headquarters marched from Jacobsdaal to Paardeberg, leaving a brigade (Wavell's) at Jacobsdaal. At Paardeberg we found Cronje's force headed by the cavalry, and after a week's shelling and sniping the Boers surrendered."

"While at Paardeberg, we got up another 200 ox wagons loaded with supplies. We off-loaded these, and all other wagons, and sent them back to Modder River and Kimberley, but heavy rains were falling, and the roads becoming quagmires with the enormous amount of traffic, our losses of oxen and mules were very large. It sometimes took a whole day for a small convoy of loaded wagons to do a five-mile trek; and, instead of thirty hours, the journey from Kimberley to Paardeberg often took four days. During most of this time the troops were on half-rations of biscuit; but, on, I think, February 26th, sufficient food had arrived to increase the ration to ¾ lb., and on this ration, supplemented with groceries and plenty of meat, we marched to Bloemfontein."

"The supply of cattle was very uncertain, for owing to deaths among the transport oxen I had on one day alone to hand over 250 slaughter cattle to be used as trek oxen. The meat contractors either could not, or were afraid to, send cattle through, and one evening I found that I had only two slaughter oxen left to feed 35,000 men with the next day."

"I sent back an officer (Captain Atcherley), twenty miles, to hurry on 180 head which were behind us, and I offered a reward of £1 for each ox and 1/- for each sheep captured by the troops. This, though strictly against regulations, had the desired effect and I have never been short of cattle since."

"We had a fight the next morning at Poplar Grove and, in the evening, I had 600 head of cattle and 2,000 sheep, for which I duly paid the rewards I had offered: but it was a near thing, as if the troops had had no meat for a single day I should probably have been on my way back to Cape Town, and perhaps to England, in disgrace."

"On March 13th we reached Bloemfontein, and I at once requisitioned everything in the various shops, paying good prices for them."

"Up to date, we have had no supplies except those we brought with us or obtained in the town, but I hope that the railway southwards will soon be opened. The Boers must have gone off in a hurry, as they left nearly a quarter of a million in cash or notes in the banks. The government had, however, carefully overdrawn its own account. I was lucky enough to secure one of the flags which flew from the government buildings, as well as a Transvaal flag which was flown when President Kruger was here."

"I have got the markets to open again, and have bought a good deal of flour, meal, oat hay, mealies and vegetables, but we have run out of oats and some hospital supplies."

"The troops are now on full rations, and everyone is delighted to taste bread again, as we have been nearly five weeks on biscuit."

"The bakers in town are making all the bread they can, and the troops are helping them. So far, we have no bakers or ovens, but when the railway is opened we hope to get some up from the south."

"After we took Cronje's laager I had a mild attack of dysentery, caused, I fancy, by drinking the water in which hundreds of dead horses and cattle (killed by our shell-fire) were floating. I had hoped to take Colonels Bunbury and Johnson with me for transport and supply work respectively, but Bunbury had to be left at the Modder, where a senior officer was essential, while Johnson had to go back to Kimberley shortly after we started to hurry on the supplies and transport we so urgently needed. Consequently, I was ultimately left with Quartermaster Law (who acted as a kind of secretary), and with everyone demanding mules and oxen to replace casualties when none were available, and others grumbling at the reduced rations, my life was, like the policeman's, not a happy one."

"Before we left Jacobsdaal I was sent for by the Commander-in-Chief, who informed me that it was impossible for one officer to supervise the supply and transport services with such a large force, and that he was therefore appointing Sir William Nicholson Director of Transport at Army Headquarters."

"Naturally, I had simply to obey orders and, as Sir William is personally a most charming and amusing man, I was able to do so the more cheerfully, and I am sure that he saved me many a wiggling for the rest of our march."

"As soon as I heard Ladysmith had been relieved I suggested that I should return to Cape Town (from which place I had been absent for seven weeks) and look after supply and transport on the lines of communication, which I could hardly do from Bloemfontein."

"This was arranged, and Colonel Ward having arrived from Ladysmith, I am going down at once to Cape Town."

"Cape Town, 27th March, 1900. I reached this place after a forty-eight hours' railway journey. I found heaps of ships detained here, unable to unload their stores and supplies, and I have wired home to stop shipments of forage of all kinds till further orders. I will at once go into the whole question of supplies, as it is useless having more sent here than we can land."

"Coming down country, *via* Norvals Pont, I noticed that the Boers had made a bad job of the railway bridge, which will not be repaired for months, I should say. At present, everything has to cross by a single pontoon bridge, and we are losing a lot of mules daily, as the long teams of ten mules are very difficult to drive across; since, if one of the mules swerves or slips he falls into the river and is drowned, often dragging two or three others with him. While I was there four were drowned in this way."

"As we have to rely solely on this bridge and on the road-bridge at Bethulie for supplying some 50,000 men and 30,000 animals I shall be glad to see the trestle railway bridge finished."

"After you leave Springfontein the railway to Bloemfontein and beyond forms the neck of a bottle, and I fear traffic will for some time to come be terribly congested at the two bridges and at Springfontein."

"Some of the preserved meat sent out was reported to be so salt that it produced intense thirst, and the doctors have been ordered to report on it."

"Lord Roberts is writing about the size of the tins of preserved meat. They should never exceed 1lb.— $\frac{3}{4}$ lb. would, I think, suffice. I have often written to the same effect during

the last twenty years, in which period the public must have lost thousands upon thousands of pounds from wasted meat, as, when a man has to carry a tin of meat weighing several pounds on his person, he invariably throws away all he cannot eat himself, and if he is not hungry he throws away the entire tin. Tins should have a band or fastening which can easily be stripped off and enable the tin to be opened, thus saving the necessity for tin-openers, which are seldom forthcoming when wanted. We should also be supplied with compressed tea in $\frac{1}{2}$ oz. cakes, and loaf sugar, say, in 2oz. cubes, so that each soldier may readily carry his grocery ration in his mess tin."

"What the men most like after tea and sugar is jam, and I would send out small tins of jam for each man to carry, such as are sold in many canteens at 1d. a tin."

"What is wanted on the march is something like jam or potted meat, which will help the biscuit ration to go down."

"I have the greatest admiration for 'Tommy' after the last six weeks. He marched fifteen to twenty miles on three-quarter and sometimes only on half-rations. He had two or three fights a week in addition to his marches, he dug trenches all night, and all this without tents in hot and dusty weather for the first half of the march, and afterwards in floods of rain, and he never went sick. In fact, we had hardly any sickness till we reached Bloemfontein, and then no doubt the bad water they had drunk began to tell on the men, and numbers went to hospital with enteric and dysentery."

CHAPTER IX.

The Occupation of the Orange Free State, and the
Advance to Pretoria.

During March and April, Army Headquarters remained at Bloemfontein, while reinforcements were being concentrated and the army refitted, preparatory to an advance northwards. On March 31st, the Boers managed to capture a convoy of some 100 wagons at Sanna's Post, while on April 3rd, they surprised three companies of infantry at Reddersburg. They also invested Wepener, which had been garrisoned by colonial troops, who had advanced from the Cape Colony over Aliwal North bridge; but, on April 25th, the garrison was relieved and the place evacuated. Most of the supplies collected at Wepener had to be destroyed, sufficient transport to remove them not being available on the spot.

By the beginning of May, nearly two months' supplies had been collected at Bloemfontein, where a large supply depot was formed and placed in charge of Colonel Hare, who had been transferred from the depot at Orange River Station.

On May 5th, Lord Roberts advanced towards the Vaal River, occupying Kroonstad on the 13th, where a main supply depot was shortly afterwards established under Colonel Lea. On the 17th, Mafeking was relieved; while, on the 19th, Sir Redvers Buller occupied Newcastle, in Natal.

The supplies at Mafeking had been carefully husbanded by Captain Ryan, Army Service Corps, during the siege, and when the relief took place there was still available for consumption a considerable quantity of breadstuffs and tinned meats, but groceries were running short, while the supply of medical comforts was well nigh exhausted. The following statement gives the quantities of supplies remaining on hand at the date of relief:—

Breadstuffs—

Boer Meal	..	..	..	..	8,334lbs.
Mealie meal	..	..	..	..	8,485 „
Flour	..	..	..	..	1,996 „
Biscuit	..	..	..	..	12,088 „
Oat flour	..	..	..	..	4,176 „

Tinned Meats—

Corned beef	..	..	..	..	13,027	lbs.
Road rations	..	..	..	..	5,448	„
Assorted preserved meats	..	..	..	..	40,224	„

Groceries—

Tea	..	..	..	..	300	„
Coffee	..	..	..	..	4,340	„
Sugar	..	..	..	..	2,030	„
Salt	..	..	..	..	250	„
Pepper	..	..	..	..	50	„
Compressed vegetables	..	..	..	..	522	„
Rice	..	..	..	..	4,069	„
Split peas	..	..	..	..	929	„

Medical Comforts—

Tinned milk	..	..	..	..	520	tins.
Maizena	..	..	..	..	24	„
Oatmeal	..	..	..	..	300	lbs.
Cornflour	..	..	..	..	135	„
Bovril	..	..	..	..	168	tins.
Pearl barley	..	..	..	..	50	lbs.
Cocoa	..	..	..	..	150	„
Whiskey	..	..	..	..	3	botts.
Brandy (liqueur)	..	..	..	..	30	„
Dop Brandy	..	..	..	..	12	„

Forage—

Oats	..	..	..	..	38,787	lbs.
Bran	..	..	..	..	41,098	„

Meantime, for the protection of Rhodesia the War Office had despatched Lieut.-General Sir F. Carrington with a force of 5,000 men and 8,000 animals to Beira, to which port four months' supplies had been shipped.

A portion of this force assisted in the relief of Mafeking, while the remainder moved southwards to Buluwayo, on reaching which station their base of supply was changed to the Cape Town—Orange River—Mafeking line.

Extracts from Diary.—"Cape Town, 4th April, 1900. There are now over 120 days' reserve rations at the ports or on the sea, and, as more ships with supplies are leaving England

daily, I have cabled home begging that further shipments of biscuit, meat, groceries and forage, both to Natal and the Cape Colony, may be stopped till further orders.

"We have thirty supply ships which we cannot get alongside the docks to unload, and if any very rough weather comes on there might be a catastrophe.

"It is useless to send out stores quicker than they can be off-loaded, as when they are landed hurriedly in lighters they are badly stacked and protected, and rot if bad weather comes on. If, on the other hand, they remain on board, the public have to pay thousands of pounds a day for demurrage.

"The War Office know what has been ordered, and our states show what is out here. They can easily calculate what we want to keep four months' supplies going, and if we do run down our stocks now and then it does not matter very much, as a proportion of the troops will always be near the coast, and can be fed by contractors.

"Just at present, we are very short of tarpaulins and sail-covers. The Ordnance say they have plenty coming, but they are not here, and several stacks of supplies remain uncovered for want of them."

"I do not understand what is being done about the troops for Beira. The War Office have apparently told the Chartered Company to arrange for their supply, and the Chartered Company have, without my knowing anything about it till two days ago, been buying forage, mealies, mules, harness, wagons, etc., here, and competing with us in the local markets."

"It is quite wrong that two sets of people should be buying the same article in the same market for the same person, and that is what it seems is being done.

"I should like to know what, if any, responsibility we have regarding the supply of this force. Lord Roberts, I assume, commands it and must, therefore, be responsible for its supply. We should be given full information on the subject, but at present we have none except what we can pick up locally."

"Cape Town, 13th April, 1900. We have suffered two rather serious reverses in the Free State. On one occasion a convoy was captured at Sanna's Post, including, I think, six R.H.A. guns and over 100 of our wagons. I hear from Captain Atcherley, who was in charge of the transport, that our troops had no idea the enemy were so near, and that they were entirely surprised. Out of six Army Service Corps (or attached) officers, three were captured and the remainder escaped by the skin of their teeth. I have not yet heard the details of the other affair at Reddersburg, in which we lost three companies of the Royal Irish Rifles and some mounted infantry.

"Consequent upon these affairs, we have been throwing troops into the Free State as quickly as the railway can carry them, and our supply arrangements suffer accordingly, as with a single 3ft. 6in. gauge line we cannot push forward troops and supplies at the same time."

"To my mind our military organisation is very faulty in some respects. If we carried out the regulations for the supply of an army in the field, the General of Communications would be over all departments, but, as it is, the heads of departments are mostly on the headquarters staff hundreds of miles away, and not on the line of communication staff. Every department naturally thinks its own requirements the most important, and one consequently finds the railway blocked at times with troops, remounts, transport animals, vehicles, traction engines, ordnance stores, hutting, hospitals, etc., with the result that I have been unable so far to do more than just feed the army from hand to mouth since it has been in the Free State. I have had no chance of forming reserves at Bloemfontein, and this must be done before any real advance can be made. Another difficulty is that no one represents the General of Communications at Army Headquarters; in fact, no one seems to know where the lines of communication begin or end."

"The ports are getting quite blocked up with vessels which we cannot unload, while thousands of tons of hay, flour and bran continue to be advised by cable."

"I notice that when supplies are sent as cargo they are generally stowed at the bottom of the ship—I imagine, to induce the naval transport and military landing authorities to berth the vessel quickly and unload all the private cargo in order to reach the Government supplies underneath. This would be obviated if the War Office only shipped supplies in mail steamers, transports and store ships."

"Sail-covers we are still in want of. We could use several thousands more than we have; in fact, I find great difficulty in preventing supply officers taking tarpaulins from the railway trucks to cover their supplies, and the next time supplies are loaded in these trucks they are ruined if it rains. So far, we have been lucky and have had but few supplies damaged, but we have such enormous stacks of bran, grain and hay out in the open at the docks that a storm or a fire would ruin thousands upon thousands of pounds worth."

"We have again reorganised the transport, on paper, and the mule companies are now styled the 'right' and 'left' half companies of the Army Service Corps company, instead of A, B, and C mule companies."

"Regimental transport has been virtually abolished, and brigade and divisional transport substituted. Had not Lord Roberts and Lord Kitchener ordered this to be done

when they arrived in South Africa I hardly think our army would now be in Bloemfontein. All my service, I have been convinced that regimental transport, as such, would always prove a failure in war time, owing to its extravagance."

"I see by the estimates that they propose to increase the number of Army Service Corps 'transport' companies. What we want most is more officers, non-commissioned officers, artificers and clerks, not more transport companies. The Army Service Corps transport company as now organised is, and always will be, comparatively useless in South Africa or in any country I have ever served in."

"Very few of the Army Service Corps drivers out here are driving transport wagons or carts. They are employed as servants to doctors, hospital orderlies, mounted infantrymen, drivers of maxim guns and ammunition wagons, etc., and are no doubt most useful in those capacities, but they could no more drive a Cape mule or ox wagon than fly. Some hundreds of them are usefully employed as supply issuers."

"I hardly know myself how many troops I am now feeding, but I fancy they must include most of the able-bodied white population of South Africa who are not fighting against us, and possibly some of the latter are subsisting on the supplies captured from us."

"This country is much like Portugal in Wellington's time: it cannot support a large army and a small one is of little or no use."

"There is a good deal of enteric amongst the troops in the Free State, due probably to the fortnight or so we stopped near Cronje's laager, where the water became putrid from so many rotting horses, mules and oxen floating in the river."

"General Rundle arrived here with his division the other day and asked for Colonel Hope as his deputy assistant adjutant-general. Hope did not want to go, so I detailed Colonel Lea, who had just arrived, but when my application reached army headquarters the authorities objected, Lea being a full colonel. Lea has now been relegated to the lines of communications in the Free State, while Majors Thomas and Gilpin have been appointed deputy assistant adjutants-general of the 10th and 11th Divisions, and Captain Atcherley of the Mounted Infantry Division. All three are good men. The Yeomanry divisions will probably want one or two Army Service Corps officers as deputy assistant adjutants-general, and I shall soon have no senior executive officers left."

"Lieut.-Colonel Landon is rather seedy, so I have sent him on a trip to recruit his health. He is one of our best officers."

"There is a deal of fuss about the Queen's chocolate. Some, which went up country for one regiment, was issued to another; the troops from Ladysmith, or most of them, have

as yet had none, while I am looked upon as personally responsible that everyone has it. Even a letter from a deceased soldier's grandmother, demanding her grandson's tin, is passed to me. There was not sufficient chocolate sent out for the 180,000 troops or so we have in South Africa, and it would be a great boon if another 50,000 tins could be sent us.

"I have given an arbitrary decision that no one is to have a tin who was not in the country on the 1st January last, but this is no doubt frequently evaded. I believe men are getting as much as 20/- for an empty tin."

"During the past twenty-five years, the question has constantly arisen whether soap should be an Army Service Corps or an Ordnance supply on service. I have always advocated that the Army Service Corps should supply it, because, wherever there are troops there must also be a supply depot of some kind. For years, the Army Service Corps supplied soap, on service, but, some time ago, the regulations were altered and now the Army Ordnance Department have the supply. The result is that troops on the march can seldom obtain soap, and, consequently, worry the local Army Service Corps officer, who has really nothing to do with the issue."

"To-day, I received the usual howl from Boshof, in the Free State, that the troops there have no soap and can get none from Kimberley. The result is that for want of soap our soldiers are getting verminous, which is as unpleasant for others as for themselves."

"I have just been inspecting some wagons the Imperial Yeomanry have brought out. They are utterly unsuited for this country, and are simply so much money thrown away. They have a crank brake fitted in front instead of in rear of the wheels, and a high seat, out of which the driver must be thrown crossing a steep drift, and, unless he sticks to the seat, he cannot put on or take off the brake without which the wagon will overturn going down or stick fast going up hill. After all that has been written and said about transport since the Zulu War, it is pitiable to see this kind of wagon being shipped by hundreds to this country, where they will eventually be used for firewood after being sent up country by rail at heavy expense. For the veldt, a wagon with a high seat and without a brake in rear of the hind wheels is more or less useless to carry anything but the lightest of loads."

"I have seen Sir F. Carrington, and he does not seem quite to know who is responsible for feeding the troops going to Beira, but thinks everything has been arranged for between the War Office and the Chartered Company. So far as I am concerned this will suit admirably, but, of course, I do not want to have sudden demands pouring in for live cattle, mules and foodstuffs for which I am not prepared. When once the

Rhodesian Field Force joins hands with the troops from Kimberley and Mafeking, and the railway is opened through to Buluwayo, we must necessarily supply everyone from the south."

"The majority of the sail-covers we get from the Ordnance are simply lengths of ungreaed canvas sewn together. They hardly keep out the wet at all; in fact, wherever they touch anything they at once leak at that particular spot. What the Army Service Corps want is a really waterproof sailcloth, something like the green ones the tortoise-tent people used to supply."

"The rainy season has just begun along the south coast, and we have hardly a single sail-cover that is any good for keeping out the wet. I am more than ever convinced that such stores should be sent out direct to the Army Service Corps. As it is, one has the greatest difficulty in getting things out of the Ordnance people, not perhaps due to any fault of theirs, but simply because what they think most pressing comes first. Four thousand really waterproof sailcloths, about 30ft. square, are badly wanted at Cape Town, Port Elizabeth, East London and Natal—a thousand at each place. Their cost will be saved ten times over in the next three months."

"The heavy traction engines under Templer are playing the very mischief. Ten of them were sent by rail to Kimberley to carry supplies to Paardeberg, but they could not travel any distance over the veldt until working parties accompanied them to make roads. None of them ever reached Paardeberg."

"Here, six engines with three trucks apiece are kept to convey supplies, etc., to the camp at Maitland, three miles out of Cape Town, and a few days ago one of them, after smashing the pipes supplying water to the Woodstock district, broke through the roadbridge, and now rests in the bed of the river."

"Templer is, of course, an enthusiast, and when I came back here I was just in time to stop him getting another dozen engines out from home."

"Unless they improve on them a great deal they are quite unsuited for the veldt in wet weather, but in a European country with good metalled roads they might be a useful adjunct to ordinary road transport, though, I think, they are too heavy and clumsy and should be replaced by motor carriages except, perhaps, for moving such things as heavy siege guns."

"I have to-day received a distribution list from Natal, and notice that five Army Service Corps officers have been graded as assistant adjutants-general, I presume to give them the extra pay and allowances. This puts me in an

awkward position, as I have refused to recommend any officer here for a higher appointment than his rank entitles him to, and now to make five officers—three of them majors—assistant adjutants-general right off the reel will cause the seniors to grumble.”

“Lieut.-Colonel Clayton, who commands the Army Service Corps companies in South Africa, now sends orders to Major O'Dell, an assistant adjutant-general, who commands the companies, in Natal. Lieut.-Colonel Landon, who is with me, finds Morgan and Lewis, his juniors, drawing more pay than himself. Everyone will, during the next week or so, be sending me letters clamouring for higher rank and more pay.”

“Almost the two junior quartermasters in the Army Service Corps were recently converted into staff lieutenants, increasing their pay by some 50 per cent., and I immediately received lengthy epistles from other quartermasters claiming the same position.”

“Cape Town, 25th April, 1900. We are doing all we can to hurry up food and forage to the Free State and to Kimberley, but there are so many troops and horses that they seem to eat everything as fast as the railway can carry it up.”

“Our traction engines are going strong, and make light of all obstacles—during April, they have broken down a bridge, burst the water supply of a township, had two collisions with tram-cars, injuring several people, and have twice knocked down the electric light posts, on one occasion putting a portion of the town in darkness. Sir Redvers Buller sent them away directly they reached Natal, and now we are ordering them to stop work here.”

“Some rather amusing incidents are reported. At Bloemfontein, the other day they arrested the head man of the transport contractor, who had a Dutch name, and sent him to Cape Town as a prisoner of war, and it took a week to discover the mistake which had been made. One of the meat contractor's drovers was arrested last week for stealing the contractor's cattle he was driving. Again, while some friendly natives were driving in Boer cattle in accordance with orders they had received, the owner rode to the nearest commanding officer and accused the natives of stealing his cattle. The commanding officer ordered the natives to be seized and handed over to the provost, and the cattle to be given back to the Boer. It took two or three days to explain the mistake, and the cattle had then disappeared.”

“A good Yeomanry story comes from the lines of communications:—In the guard tent at the supply depot was a single court-martial prisoner. The night was dark and wet,

and a public-house close to the guard-tent. One by one the guard obtained permission from the non-commissioned officer in charge to leave the tent for a few minutes. Eventually, the sergeant departed to see where the others had got to, leaving the sentry and prisoner together. After a burst of cheering from the 'public,' as the door opened, presumably to admit the sergeant, the sentry hastily handed over his rifle to the prisoner and disappeared. Shortly afterwards, the field officer of the day came his rounds and was challenged by the prisoner-sentry, who, at the same time, ordered the 'guard' to turn out, but the field officer, who was tired and had still a long round to make, ordered the guard to turn in again, and went on his way quite satisfied that everything was correct, whereas the entire guard consisted of a single prisoner."

"Cape Town, 2nd May, 1900. We have been sending supplies up to the front as hard as we can. There must be nearly three months' supplies for 60,000 men, and five or six weeks' for 30,000 animals, in the Free State by this time, but it has been a difficult business to get it there, as every department has been claiming precedence for their stores; whereas though Mr. Thomas Atkins can for a time get along without a general hospital and with only 400 rounds of ammunition and somewhat indifferent clothing, he will not march or fight without food, while, if the communications are threatened and no reserve of food has been collected, he must retire."

"The head of every department has become a little God Almighty by being put on the headquarters staff, and you can hardly ask any of them a question without getting their backs up. We were better off under the old *regime*, when we had two staff officers only, but now we have ordnance, railway, veterinary and remount officers all wanting their say first, and issuing orders 'by order' of goodness knows who, and as a result we are often getting what are, to my mind, useless stores sent up before supplies and transport which must always be of chief importance when an army is moving forward. Our want of system is terrible."

"The Army Service Corps (supply) non-commissioned officers and men are apparently getting tired of hard work in the field and are, I am afraid, being invalided home much too rapidly. I hope those who remain out here and do their work well will be promoted over the heads of those who go home sick."

"All tinned supplies should open with a key or a strip of tin soldered on. I notice the troops are always cutting their fingers to pieces trying to open preserved meat tins with a broken tin opener or a clasp knife."

"All hay sent from the same country should be in the same sized bales, and have a fixed weight for each bale."

"Oats and other grain should be sent in three or four-bushel sacks all weighing the same. It will be impossible for Army Service Corps officers to take stock or render accounts if every bale of hay has a different weight, or if the weights of sacks of oats in the same ship vary between 150 and 170lbs. When bales of hay and sacks of oats once reach a depot they have to be taken at a uniform all-round weight."

"Preserved meat should be in 1lb. or even in $\frac{3}{4}$ lb. tins. If 4lb. or 6lb. tins are supplied it means that from 300 to 500 per cent. of their contents will probably be wasted, as the soldier who has to carry a larger tin than he requires for the day's consumption eats what he wants and throws the rest away. In our army we have not yet reached the stage when one soldier will carry another's food as well as his own, and a 4lb. or 6lb. tin of preserved meat is a heavy load in addition to his other kit."

"A medical officer should examine hospital supplies when they are purchased or, at any rate, before they are shipped from England. I continually receive letters that the port wine, whiskey, arrowroot, milk or something is bad, just because an individual doctor happens to prefer some other brand, or possibly because a hospital subordinate wants to get a percentage on articles purchased locally. I find sometimes that wines, etc., have been purchased at extraordinary prices when there have been plenty in store at the time, and if I ask the reason I am told the medical officer on the spot did not think those in store good enough."

"The winter will soon be on us, and the veldt will be bad for oxen in less than a couple of months. We cannot feed oxen with hay, as the railway could not carry enough, so we shall have to use mules. I should say that we shall want at least 8,000 more mules in the next three months, with wagons and harness as well."

"Parcels for the troops should be carefully examined at home before they are packed up. The other day, when some cases of them were being unpacked, several of the parcels were found to contain wax matches, which in a store full of hay and other combustible material are somewhat dangerous. Other parcels contain bottles of spirits and beer, and it does seem ludicrous that we should convey a heavy bottle of ale all the way from England to Bloemfontein simply because some foolish servant-maid chooses to put brown paper round it and address it."

"Cape Town, 14th May, 1900. We are still hard at work unloading ships and pushing up supplies in every direction.

I am in a fright every day that the railway will break down and be unable to carry the 800 to 1,000 tons of food we eat daily. Luckily, Lord Kitchener realised about a month ago that the troops must have supplies, and for three weeks or so we have been sending 180 trucks of food and forage daily into the Free State, where we have now from two months' to ten weeks' rations for some 70,000 men and 30,000 animals. I am filling up Kimberley while I can get trucks, and if I can get three months' food there for 20,000 men and 10,000 animals I shall be safe along the Western line for some weeks to come at any rate."

"Once or twice I have suggested that a financial adviser should be sent out. One is wanted more than ever now, if the taxpayer's pocket is to be protected. Claims for compensation pour in by the thousand, and the most importunate claimants will no doubt get paid something which will be considered as a precedent. They already talk of £3,000,000 of claims having been received."

"Hospital patients have apparently suddenly developed a most extraordinary craving for brandy and have run me entirely out of it. I have had to buy up all I can get here and wire home for a larger supply."

"At present I cannot get away from Cape Town, but I hope to run up to Pretoria as soon as possible, after the troops get there."

"I am losing a good many officers from sickness. Captain Black, who has just been invalided, is the last."

"We hear a deal of grumbling from contractors as to the delay in getting their bills paid. The pay people say they are overworked but I have an idea that, unless he greases the palms of the clerks in the Pay Office occasionally, the contractor who wants a big cheque has sometimes to wait for his money. I believe this was the case during the Zulu War, when as much as £20 would, I was told, be paid for getting a large bill through quickly."

"Cape Town, 22nd May, 1900. Mafeking is relieved and I hope we shall not send heaps more men up to hold the place, as it cannot possibly be of much use now; indeed, every thinking soldier will probably admit that it would have been far better for us never to have sent troops there in the first instance, but I fancy this was a political move. Captain Ryan, Army Service Corps, seems to have done very well indeed. He deserves to be rewarded."

"During the siege of Kimberley the officer in charge of supplies sent orders by flashlight signals to firms in the Colony for large supplies of forage, and now, months afterwards, when prices have gone down, I am asked to take over this forage,

which has never reached its destination, at enormous rates. I have repudiated the transaction on the grounds that a subordinate Army Service Corps officer, locked up in a town which is invested, has no business to order foodstuffs, to be supplied after the siege is over, except through the staff officer concerned."

"Colonel Johnson and Lieutenant Moore are, I have just heard, in hospital at Bloemfontein. Lieut.-Colonel Landon I have sent with General Hunter, who asked me to let him go with him to revictual Mafeking."

"During the past four months, we have lost over 150 non-commissioned officers and men of the supply branch from deaths, invaliding, etc."

"The dough-making machines have at last reached Bloemfontein, where work was started with one of them. Colonel Hare does not speak well of them and reports that it takes twice as long to make the same quantity of dough as can be made by hand by the bakers who work the machines. This is not a satisfactory result, and, if correct, it seems a pity they were not tried at home before they were sent out. I asked for machines worked by oil, coal or mules, but the War Office would send out machines worked by hand. I have asked Hare for a further report. We have very heavy casualties amongst our bakers, who seem to go sick and die twice as quickly as anybody else, so that a good dough-making machine would have been a godsend."

"We are somewhat unfortunate with the hay and oats recently sent out. Yesterday, the steamer 'Mariposa,' from Canada, was burnt with some 2,000 tons of hay on board. The fire is supposed to have originated from the spontaneous combustion of the hay, which had probably been shipped in wet weather. Another ship from Canada, the 'Janeta,' has a lot of her hay and flour damaged from heating during the voyage."

"It is very rough on us to have forage sent out which heats and is damaged like the above, or which is in rotten sacks like the bran from the 'Pendower,' or which is of such inferior quality that we have to keep it for mules on the coast, like the oats from the 'Twickenham' and 'Port Elliot.' It is just throwing money into the sea to send out such stuff and expect horses on active service to thrive upon it."

"The hay from India is just as bad. Even the Indian horses refuse it, and to my mind it is only fit for use in crates for packing crockery. I hear they have been selling it in Natal for a shilling a bale."

"I hope to be able to send the War Office by this mail a complete list of the medical comforts which are in store. We have a very large number of sick now, and I am calculating on 20,000 sick in the whole force, including Natal."

"As regards supplies generally, I hope the War Office authorities will remember that the quantities in our weekly states, plus the quantities on sea or ordered, are all we have to depend on, and that before these stocks come down to a four months' supply they should arrange to ship further supplies, but it is no use sending out sixty or seventy ships at the same time when not more than four or five can be discharged in a week at each port. We do not want more than a two months' supply of biscuit, preserved meat, lime-juice, rum or compressed vegetables, and a week's emergency rations are ample."

"Every army doctor seems to be asking for supplies that are not in store. I am now getting demands for essence of beef instead of extract of meat, claret, burgundy, Benger's food and many other articles which have not been sent out. One medical officer has even been purchasing *pâté de foie gras*, truffles, and cocks' combs for convalescent officers."

"The importation of slaughter cattle to Beira from Argentina by the Chartered Company on behalf of the War Office has not proved a success. I hear that 400 of one consignment either died or had to be slaughtered on the voyage, foot and mouth disease having broken out amongst them. As my old general (dead long since) used to say when such incidents occurred, 'Well! well! Nunky pays,' referring to the British public, who, in this instance will, I fear, have indeed to pay through the nose."

"Cattle should be imported from Australia or Madagascar. Argentine cattle are so wild that they are only fit for slaughter immediately they land in this country, so that even if the cattle had not been diseased they would have been of little use to us at the front."

"I have as yet taken no steps with regard to the supply of Carrington's force, but have wired him to let me know when he wants anything. As railway communication between the Cape Colony and Mafeking will be reopened in a week or ten days, I may shortly expect heavy demands from Carrington, who will naturally prefer to obtain his supplies from the south instead of from the north, where everything has to be carted 270 miles by road, from Salisbury to Bulawayo. He has lost a lot of horses and mules from horse-sickness, as there have been no frosts in Matabeleland yet."

"There is now very nearly a full two months' reserve of supplies in the Free State and at Kimberley, so I am pretty safe for some time to come, unless the unexpected happens and they put the last straw on the camel's back by trying to feed every man and horse along the single line of railway from Cape Town."

"Six months ago, I begged the railway people to get out more rolling-stock, but they then thought they had ample. Now, when the line has been repaired, they find that they could easily use double the amount at their disposal; in fact, it is only by being almost insubordinate that I have succeeded in getting supplies sent up in preference to hutting, tents, hospitals and traction engines."

"The War Office have not been sending out the waterproof sail-covers with strong rope grummets I asked for, but the dry weather has set in up country, so it does not matter very much now, except at Cape Town, where I have everything pretty well covered. Later on, however, they will be wanted badly."

"The following officers should have good billets when the war is over:—Lieut.-Colonels Clayton and Landon, Captains Ryan, R. Ford and Atcherley, and Quartermaster Edmondson. There are, of course, many other deserving ones at the front and in Natal, but the above have to my personal knowledge all worked very well indeed."

"Cape Town, 30th May, 1900. Several stations report the royal yeast cake to be full of weevil, so I cabled home to stop further supplies, at the same time ordering a dozen tins to be sent here for examination. When I got them I found the contents of only one tin were weevily, and this tin had been punctured by a nail owing to the careless manner in which the lid of the packing case had been put on."

"I have seen some 100 tins of the 'Viking' brand of condensed milk, the contents of which were very bad indeed, but they were all open, and I have been unable to discover a bad tin when I opened them myself. There must, however, be something wrong, as so many stations complain, but it may be due to careless nailing like the yeast cake."

"Taking things all round the Army Service Corps officers and men out here have done wonders. After the war is over we shall have a corps, every officer in which will have had a more or less varied experience and will consequently be more than twice as useful in any future campaign."

"The official letter from the War Office about supplies for the troops in Rhodesia does not seem to me very clear, but I dare say this is due to my obtuseness. It will be a great mistake if the Chartered Company are to send up train loads of supplies from Cape Town to Buluwayo to feed Carrington's force when the railway is opened through to Mafeking and beyond, which it will be in a week or so. I am going into the question, and have cabled to Carrington for his views on the subject."

"I am sorry to find the Army Service Corps personnel are dying and being invalided very quickly. They have a very rough time, on service, as however hard they work neither the supply or transport service is ever likely to give entire satisfaction in war time. In fact, any general who pretended to be quite pleased with his supply and transport arrangements in the field would probably not be worth his salt. Army Service Corps officers, men, and animals must be worked till they drop, and that is what, I am sorry to say, has to be done out here. They 'seek the bubble reputation,' not 'at the cannon's mouth,' but at the heels of the army mule, where they usually find more kicks than halfpence."

CHAPTER X.

The Organisation of the Army Service Corps Personnel.—The Supply of Medical Comforts.—The Parcels Difficulty.

By the beginning of June a total of 241 Army Service Corps officers had been sent to South Africa. Of these, four had died and sixteen had been invalided. In addition to the above, 126 officers of other corps had been attached for supply and transport work. The want of a sufficient number of properly trained Army Service Corps officers was severely felt.

Forty transport companies in all were sent from England. The personnel of each company should have been that laid down in the war establishments, and in those companies which first came out this was the case, except as regards artificers; but, as the number of troops increased and more companies were required, the proportion of warrant officers and non-commissioned officers gradually decreased with each fresh company sent out: since, even when the whole of the Army Service Corps reserves had been called up, the personnel was still insufficient to meet requirements.

There have never been sufficient artificers to bring the companies to their full establishment, and the want of men to repair vehicles and harness, and to shoe mules and horses, has caused considerable inconvenience to the army and expense to the public.

In future, the establishment of warrant officers, non-commissioned officers and artificers for each company should be that fixed by the war establishments, and the Army Service Corps should have a sufficient personnel serving either with the colours or in the reserve to supply this for every company in the corps.

The number of Army Service Corps drivers sent to South Africa varied from fifteen to twenty-three with each company, according to its allotment for work with the field army or on the lines of communication. These drivers were engaged as bātmēn for Army Service Corps and medical officers, as cooks, as cold shoers, and as assistants in the artificers' shops. The number originally sent out was insufficient, no margin having been allowed for sickness; but, eventually, an additional 1,000

men arrived and proved more than sufficient to meet all requirements, the men not being required to act as drivers.

The number of supply men available for the field army and for the lines of communication has been :—clerks, 535 ; bakers, 541 ; and butchers, 220. In addition, 184 transport non-commissioned officers and men have been employed on supply work, as well as 293 civilian clerks and issuers, 59 civilian bakers and 14 civilian butchers. Thus, a total of 1,846 soldiers and civilians has been employed.

Some 2,000 natives have also been engaged as labourers, at the different bases and at stations along the lines of communications.

It has not been possible to adhere to the supply establishments laid down by the regulations for corps, divisional and brigade troops, there being insufficient supply non-commissioned officers and men in the corps to enable this to be done ; and, although endeavours were made to supplement the numbers available by utilising transport men and by engaging civilians, the want of sufficient properly-trained supply non-commissioned officers and men has thrown a severe strain on the corps.

The number of supply non-commissioned officers and men serving with the field army, which consisted of seven cavalry and mounted infantry brigades and eleven infantry divisions, has been 319 ; whereas, according to the war establishments, they should have numbered 644. This deficiency was partly made up with transport drivers and a few non-commissioned officers drawn from cavalry and infantry units. For the lines of communication, endeavours were made to organise the personnel into depot units, but it has been impossible to maintain the strength of each unit to that fixed upon. Once formed, each unit has been kept intact and all movements of supply men from station to station on the lines of communication have been made by units.

The organisation laid down for a bakery company has not been attempted, it being impracticable to organise a mobile field bakery which would have been of any utility with troops moving rapidly from place to place. The number of bakers was found to be insufficient, and in order to provide for a proper supply of fresh bread, forty bakers or two sections, should be allowed for every 10,000 men.

The organisation of the transport companies has not been carried out as laid down in the war establishments. Instead of three companies, only two could be allotted to each division : and, as these two were made up by dividing the personnel of a single company, the number of non-commissioned officers and artificers in each company was greatly reduced ; consequently, when the personnel became still further reduced by

sickness some of the companies have been very short indeed of non-commissioned officers and artificers. For instance, No. 10 Company Army Service Corps, with the 12th Brigade, had at one time only two non-commissioned officers, the company quartermaster-sergeant and a corporal. In order to secure a proper supervision, the transport establishment with each division should never be less than three companies.

The organisation of the supply branch was left to chance, the men being sent out in batches with no organisation whatever. The supply personnel for the field army should be organised before it leaves England. Each staff and each supply officer should come out with their clerks or their supply detachment complete and ready to accompany the division or brigade to which they are attached.

In the same way, depot units and bakery sections for the lines of communication should be organised and sent from home, complete with stationery and equipment. In addition to the organised supply units, at least 15 per cent. spare of all ranks should be posted to a depot company at the base to meet demands caused by the mobilisation of fresh units at the seat of operations and to replace casualties.

Every Army Service Corps officer and clerk should leave England with stationery sufficient to last him for at least a month. In the early stages of the war the greatest inconvenience was felt owing to the want of stationery in the various staff and departmental offices. The absence of sufficient stationery means the absence of proper accounts and, consequently, of a sufficient financial check on expenditure.

Each Army Service Corps company brought with it field service stationery boxes filled with what was required, and each supply officer with the field army had also filled stationery boxes with his equipment, but the lines of communication were not so well off. A certain number of cases were sent out when the bulk of the Army Service Corps left England in the "Braemar Castle," in October, 1899, but not nearly sufficient.

The branch of the stationery department established at Cape Town, however, proved invaluable. A scale of stationery for a supply depot unit was drawn up, on which the War Office clerk in charge of the stationery depot acted and provided a large number of cases. Reserves of filled stationery cases were kept at the supply depots at Naauppoort, Bloemfontein and Kimberley ready to be drawn on, as required, and a fairly abundant supply was thus ensured.

On the 15th June Pretoria was occupied by our troops. By this time, nearly 225,000 men (including natives) and

120 WITH THE ARMY SERVICE CORPS IN SOUTH AFRICA.

100,000 horses and mules were being fed by the Army Service Corps, in South Africa, besides which many "trek" oxen were receiving a hay ration.

On the 30th June, the distribution of supplies was approximately as follows :—

STATION.	Garrison.		Quantities of Supplies in Army Service Corps Depots.	Remarks.
	Men.	Horses and Mules.		
<i>Rhodesia.</i>	5,000	8,000	120 days' supplies.	Distributed at depots along the Beira-Salisbury - Bulawayo - Mafeking line.
<i>Mafeking.</i>	4,000	3,500	100 days' supplies.	Supplies drawn from Kimberley.
<i>Kimberley and District</i> (including Vryburg, Boshof and Sir Charles Warren's force on the Western border of Bechuanaland).	7,800	2,200	2,000,000 soldiers' rations and 1,000,000 forage rations.	Supplies drawn from Cape Town.
<i>Orange River and District</i> (including the garrisons between the Orange River and Kimberley, also Colonel Adye's force on the north-west border of the Cape Colony).	3,500	2,250	500,000 soldiers' rations and 200,000 forage rations.	Supplies drawn from Cape Town.
<i>De Aar and District.</i>	4,000	700	500,000 soldiers' rations and 200,000 forage rations.	Supplies drawn from Cape Town.
<i>Cape Peninsula and District, from Cape Town to De Aar</i> (including men in hospitals, remount depots, drafts, reinforcements, and prisoners of war).	20,000	3,000	No special reserve kept.	Supplies drawn from base reserve depot at Cape Town, as required.
<i>Midland Line of Communications.</i> —Port Elizabeth - Naauwpoort-Norvals Pont line.	5,500	5,250	No special reserve kept.	Supplies drawn from base reserve depot at Port Elizabeth, as required.

STATION.	Garrison.		Quantities of Supplies in Army Service Corps Depots,	Remarks.
	Men.	Horses and Mules.		
<i>Eastern Line of Communications.</i> —East London - Queens-town - Sterkstroom-Bethulie Bridgeline.	5,000	5,000	No special reserve kept.	Supplies drawn from base reserve depot at East London, as required.
<i>Orange River Colony.</i> —Springfontein-Bloemfontein - Winburg - Kroonstad line.	40,000	10,000	6 weeks' supplies available.	Supplied from Port Elizabeth and East London.
<i>Transvaal.</i> —Vaal River-J'hannesb'rg-Pretoria, etc.	77,000	31,000	Do	Do.
<i>Natal.</i> —Durb'n-Lady-smith-Newcastle.	53,000	20,000	6,500,000 soldiers' rations and 2,500,000 forage rations.	Supplied from Durban.

After the capture of Bloemfontein and the relief of Ladysmith, enteric fever began to attack both the troops who had marched from the Modder River and those who had been through the siege of Ladysmith, and a large percentage of deaths occurred. This outbreak of enteric was partly attributable to the fatigues and privations to which the troops had been subjected, but principally to the bad water supply.

Somewhat sensational attacks were, however, made in the home and colonial papers upon the administration of the medical service in South Africa, and the Government eventually sent out a Commission, under the chairmanship of Lord Justice Romer, to report upon the allegations which had been made against the Royal Army Medical Corps.

I was called upon to give evidence before this Commission, which, I understand, arrived at the conclusion that, so far as the Army Service Corps service was concerned, everything possible had been done to furnish supplies and transport for the sick and wounded.

The arrangements made by the Army Service Corps for supplying medical comforts for the sick were extremely simple. A scale of the medical supplies likely to be required by 1,000 sick had been drawn up by the Director-General Army Medical Service before the campaign commenced. In the supply

park, with every 10,000 rations, a supply of medical comforts for 1,000 sick, or ten per cent. of the force, was invariably carried; and, although, at times, when there was an exceptional demand for a particular article, the supply of that article might run short, the Army Service Corps was always in possession of a reserve of the main items required, *e.g.*, spirits, port wine, meat extracts, preserved milk, rice, arrow-root, etc., to supplement the fresh supplies obtainable on the spot and those which formed the soldier's ration, which, when required, was drawn for patients in the field hospitals.

The scale drawn up by the Director-General was, as regards several items, found to be insufficient, and was from time to time increased, large additional reserves being demanded and obtained from home or purchased at the coast ports.

It seems questionable whether the existing field organisation of our army medical service is that best suited for a large army where the supply of doctors and medical attendants is likely to be insufficient, especially after a battle in which heavy losses are incurred or in face of a serious outbreak of enteric or other disease.

An individual officer, however devoted he may be, can only perform a certain amount of work in a given time, and, in the field, the army surgeon seems far too valuable to be employed on what may be described as "housekeeping," or what in the army is usually termed "quartermaster's work."

It might not be difficult to separate the important professional duties of the army medical officer, such as surgery, medicine, and hygiene, from those connected with the supervision of transport, the receipt and issue of clothing, equipment, stores and supplies, the pay and discipline of the patients and of the Royal Army Medical Corps, and the many other duties which in a civil hospital would be carried out by a non-professional staff.

Further, the present pattern of ambulance wagon is quite unsuited for field service in a country like South Africa, and the movement of the sick and wounded to the railway had generally to be carried out by ox transport. It would save labour and alleviate suffering if a light carriage on bicycle wheels, to which field stretchers could be fitted, were introduced into the service. Stretchers could then be wheeled by a single soldier or native, or, when necessary, carried by two or more men, as at present.

Extracts from Diary.—"Cape Town, 12th June, 1902. So far as I can learn there is likely to be a rumpus at home about the hospitals. Mrs. Richard Chamberlain has got her

back up at her treatment by the medical authorities at Cape Town, while Mr. Burdett-Coutts has been 'crabbing' the work of the Royal Army Medical Corps up country."

"I have seen a pamphlet Mrs. Chamberlain is circulating, in which she expresses herself very strongly. It seems a pity, that when she came out here with thousands of pounds' worth of warm clothing, tobacco, cigarettes and comforts, which she was only too anxious to distribute, she should have been treated with but scant courtesy. Mr. Burdett-Coutts has been visiting the hospitals at Bloemfontein as well as those at Cape Town. He has the knack of writing startling newspaper articles, and his letters to the 'Times' will, I fancy, create a sensation."

"The Royal Army Medical Corps may perhaps reply to any strictures on their management that they could get nothing when they wanted it, and that everything they did get was bad. So far, they have condemned port wine, whisky, arrow-root and preserved milk; while they have demanded essence of beef, Benger's food, claret, formaline, special kinds of biscuit, cheese and ham, and many other things we have been unable to supply on the spot."

"I have cabled home at different times asking that the supplies of beef extracts or essences, of champagne, of brandy, and of calf's foot jelly might be doubled, as the consumption was so enormous. I have also cabled for a supply of Benger's food and claret, in addition to the articles laid down in the scale originally fixed by the Director-General Army Medical Service."

"The Royal Army Medical Corps wanted the Army Service Corps to supply, as disinfectants, quantities of corrosive sublimate and liquid carbolic acid, but as these were scheduled poisons and could only be bought by a doctor, I got the General to say that poisons were not to be mixed up with supplies in the field, and that the medical authorities must obtain or purchase these articles themselves, otherwise, I might have had a lunatic baker using the sublimate as baking powder."

"When I first came out I begged the principal medical officer at the base to let me know if there was anything—supply or store—he wanted and could not get, and I would at once have it ordered, and everything he has asked for has been supplied at once."

"The Royal Army Medical Corps do not, I think, look upon the voluntary hospitals with any great favour. As it is, the Yeomanry hospital at Deelfontein is probably the best-managed hospital that has ever existed on active service."

"Sir John Furley, Red Cross Society, was telling me the other day that when he offered 200 or more beds to the Royal

Army Medical Corps at Cape Town, as he heard sick men were sleeping on the ground, they were not accepted. Of course, there are always two sides to a question, but there will, I am sure, be a fuss by and bye when the number of deaths from sickness becomes known."

"I have cabled home about the quality of coal ex 'Mascot.' It was coal dust, not coal, and it is quite useless, so I am having it sold."

"The arrangements as to the supply of forage, etc., from Canada have been unfortunate. The hay shipped—'timothy'—seemed very good, and the flour, for aught I know, was good too, but there must have been something very wrong about the method of shipment, as the 'Mariposa' has been burnt to the water's edge, the 'Masconomo' has been on fire, while a great portion of the hay and flour on board the 'Janeta' and 'Menantic' is damaged, due, I understand, in each instance to the hay, etc., having heated during the voyage either from bad ventilation in the holds of the vessels or to the forage having been shipped in a snowstorm. Anyhow, a heavy loss has occurred."

"I have just examined a quantity of preserved milk, and as two or more tins in each case are bad, I am sending home samples by post with an official report."

"A quantity of the meat and vegetable rations have been condemned. I have seen two or three tins of this food opened and should be very sorry to eat their contents. I have sent a few tins home for examination."

"The condemned sago I have sent to the principal medical officer here, for examination, and at the same time I have cabled home to have some examined at Netley."

"The preserved meat received from Australia is in tins of many different sizes, some containing 12 ozs. and others 1 lb. 10 ozs. I do not see how we can be expected to issue this meat at the scale of 1 lb. a man, unless it is in 1 lb. or 2 lb. tins. This meat arrived in the 'Gulf of Venice.' As 12 ozs. of preserved meat is about all a man can possibly eat the public do not really lose much, though it opens the door to fraud, since the tins may be issued by subordinates as containing 1 lb. or 2 lbs. of meat."

"I have cabled for 4,000,000 lbs. of biscuit and 2,000,000 lbs of preserved meat to keep up my reserves, as the troops are getting so far away from the coast that we have to keep all depots of supplies along the line well filled."

"Colonel Johnson has been invalided."

"I have made three quartermasters staff lieutenants, as they were performing quite as onerous duties as the quartermasters at headquarters who had already been given that rank. Officers and soldiers are much like children: if one

of them is given a blue marble, the others are never happy till they get one too."

"As the hospitals in Natal are using brandy, calf's-foot-jelly and champagne very freely, I have asked for a quantity to be sent out by mail steamer, and for the weekly supplies to be doubled."

"The oats from Australia in the 'Twickenham' and 'Port Elliot' were very inferior, otherwise the quality of oats we have been getting is very fair. Those from New Zealand are by far the best."

"The 600 tons of bran ex 'Clan MacLaren' were, on arrival at Natal, found to be unfit for issue, and will have to be thrown into the sea if it cannot be sold. We want this bran replaced, as we are running short, but we shall not want it in Natal so much as in the Cape Colony."

"By some mistake the Royal Army Medical Corps have been sending one or more of our convalescent native drivers home to England as invalids, and last week Colonel Clayton was just in time to rescue a couple of sick civilian bakers. They had got as far as Cape Town from East London, and would have started for England in forty-eight hours if their names had not luckily been noticed in the orderly room."

"The parcel question is becoming a serious one. When I allowed a Mr. Gatliff, who was sent out by the War Office, the use of a corner of a shed at the docks I did not think that we should gradually have to turn out our supplies to make room for the parcels, but this is how the case now stands. Gatliff has done very well, and has spent over £2,000 out of his own pocket, besides devoting all his time to what is a thankless job, as he receives nothing but abuse on every side—from the senders when they find that their parcels have not reached their destination, and from the recipients when they find, as is often the case, that the contents of the parcels have been abstracted. Soldiers' wives send them bottles of brandy and ale by means of this parcel business, and the other day the floor of the store was covered with wax matches from some parcels which had been carelessly packed and had burst open. One can imagine the danger when these parcels travel in the hold of a transport, or are stored at the base, or sent up country with large quantities of hay. The cases containing parcels are frequently so crazy that the parcels fall out, and I should fancy that 'toll' of the contents is taken by those who pack the cases, by the crews of the vessel in which the cases are shipped, on the wharf where they are landed, and in the trains on the journey up country; and when, in addition, the addresses have come off the parcels, it is easy to imagine the state of chaos brought about. My own opinion, and Gatliff agrees, is that no parcels for individuals should be

accepted, but that all gifts should be either for general distribution or for distribution to individual regiments or brigades, such as 'Gordon Highlanders,' 'Canadian Troops,' and so on. They should be properly packed in strong cases and shewn on bills of lading. The contents also require to be carefully examined to prevent matches and spirits being sent."

"Over 400 tons of parcels arrived in one transport the other day. Several firms in England are deriving a handsome income from the system, as they advertise that if, say, 1/- and the address of an individual soldier is sent them, they will supply a handsome pipe with a quantity of tobacco, cigarettes, matches, etc. Some of these advertisements I have been shown. One firm is actually circulating testimonials from soldiers and their wives regarding the excellent condition in which the goods supplied by their firm have reached the recipients."

"I feel very strongly about this parcel nuisance, which should be stopped as soon as possible."

"The Army Service Corps losses up to date, not including Natal, are 94 deaths, 254 men invalided, and 31 prisoners of war. I fear that these totals will be considerably increased during the next few months."

"Cape Town, 19th June, 1900. The Boers have been pretty active south of the Vaal, and have captured the Duke of Cambridge's Yeomanry and the Derbyshire Militia, besides two or three smaller lots. From my point of view, the worst thing the enemy have done is to break up the railway line north of Kroonstad for several miles, with the result that our communications with Lord Roberts are cut and we cannot send him any supplies. I am therefore accumulating supplies at Kroonstad, and hope to get them forward whenever the railway is repaired. I have wired for Landon to return from the western line; he is now at Mafeking. As soon as he comes back I shall try and run up the line to Kroonstad, or beyond if possible, and see that the Army Service Corps are carrying on properly."

"From the following correspondence it appears that, up to date, the medical authorities are quite satisfied with the arrangements for furnishing them with medical supplies."

" ' P.M.O., Line of Communications,—

" ' Will you please let me know if any special kinds of supplies beyond those already in use or cabled for are required in the hospitals?

" ' We have cabled home for Brand's essence of beef, Benger's food and claret, also that the supplies of meat extracts, brandy, champagne and calf's-foot jelly should be

doubled, as the demands for these supplies are far in excess of the scale fixed by the Director-General Army Medical Service and published in orders.

"Should, however, you consider any other articles of supply are wanted, we could write home by Wednesday's mail for them, cabling at the same time, if urgent.

"(Signed) W. D. RICHARDSON, Colonel,

"Director of Supplies and Transport.

"Cape Town,

"9th June, 1900."

"Director of Supplies,—

"I do not consider anything more than what has been asked for is likely to be required.

"(Signed) J. F. SUPPLE, Colonel R.A.M.C.,

"P.M.O. Base.

"Cape Town,

"11th June, 1900."

"The local brandy, which the principal medical officer approved of, and which I had to buy owing to the enormous consumption which was taking place and which was often three times in excess of the proportion fixed by the Director-General, has now been objected to, so I would rather the War Office sent us out a good French brandy than purchase more here. We have cabled for 1,000 dozen at once, and for the weekly proportion to be doubled, and I think this should tide us over."

"I have sent to the War Office samples of the 'NAO' rations, of the 'Viking' milk, and of the flour from Canada. I was going to send a sample of the coal, or rather coal dust, recently sent out, but thought the report of the Board of Survey would probably suffice."

"We receive heaps of War Office communications enclosing letters from contractors for hay, etc., complaining that we have not signed for the proper weights. We give every opportunity to the contractor's or ship's agents to verify the weights, and in any case in which there has been a difference of opinion it has been settled on the spot."

"I cannot help feeling that some of these contractors have been endeavouring to take advantage of the hurry and bustle inseparable from active service, and, thinking we should off-load the supply ships without taking careful stock of their contents, have claimed payment for a much larger quantity or weight than they actually shipped."

"Unfortunately for them, I have three excellent quartermasters at the Cape ports, by whom every consignment is carefully checked, and a large proportion of the bales of hay and sacks of grain weighed, with the result that the quantity received is often found to be much less than the quantity alleged to have been shipped."

"I see someone has been writing to the War Office that the Indian natives are not properly looked after. I cannot speak for Natal, but here I took great pains to see that they received a really good ration, so much so that the officer in charge of them said I was spoiling them by giving them too much. Of course the ration we have fixed here is the ration for Natal as well."

"Directly we reach Komati Poort we shall be able to cut off all seaborne supplies from the Boers, who, at the present moment, must have difficulty in communicating with their different commandoes, as we control the telegraphs. I fancy Buller will soon be in railway communication with Pretoria, and then I shall be able to feed Johannesburg and Pretoria from Natal, as well as from Port Elizabeth and East London."

"I am filling up the depots on the western line, viz., De Aar, Orange River, Kimberley, Vryburg and Mafeking, and I have wired to Carrington to know what supplies he wants and where he wants them."

"So far as oats, hay, flour, tobacco and rum are concerned, I do not fancy we shall want further supplies from home for another six months. Preserved meat, biscuit, groceries, hospital comforts and disinfectants we shall want more of."

"It is marvellous how such things as brandy, whisky, sugar and tea disappear, especially when our communications are suddenly cut, as everything has to be bundled out of the train one hundred miles south of its destination, and often left on the veldt with no Army Service Corps officer or non-commissioned officer to look after it."

"I am making Lieut.-Colonel Wyncoll the Army Service Corps staff officer on the western line north of Orange River, so we shall have three senior officers at the head of each line of rail, in Natal, the Transvaal and Bechuanaland."

"De Beers Company have sent in little bills, amounting to £200,000 or more, for work done during the siege of Kimberley, and as every refugee considers himself entitled to draw rations and sometimes to be put up at the hotels in Bechuanaland or Rhodesia at the Imperial Government's expense, I fancy the audit branch at the War Office will have some curious questions to settle when they get the accounts. The addled ostrich eggs, at 10/- apiece, which we paid for at the beginning

of the war, are a bagatelle to some of the claims I have received since. One claim for £10 is for a watch-dog missing on the arrival of our troops. Perhaps this dog had Boer proclivities and followed the retreating enemy."

"I am worrying Natal over the way in which they have been buying supplies. So far back as last November, I ordered that no large quantities of imported supplies were to be purchased locally without previous authority having been wired for to Cape Town, but, apparently in October and November, 1899, they bought flour, mealies and other supplies which were not on the spot, and which, I understand, are some of them even still undelivered. Only the supplies actually received from the contractors were shown in the weekly states, so that I was in blissful ignorance that hundreds and even thousands of tons of grain, flour, etc., had been arranged for at very high rates in October and November, 1899, when the prices of everything were 50 per cent. in excess of normal rates. Now, I hear the Natal Chamber of Commerce have written to the Colonial Government, begging that all purchases may be made by public tender. I have written for a report, and pointed out to the General in Natal that, to be above suspicion, purchases should only be made after inviting as much competition as possible. I do not wish even to hint that anything has been wrong, but I consider the action taken in buying, without any previous reference to Cape Town, six months' supplies of articles which were not on the spot nor had even been shipped, and then in omitting to report the quantities arranged for, seems to point to a lack of business capacity somewhere. However, Natal has given us very little trouble, and the Army Service Corps officers there deserve great credit for the manner in which the troops have been served during the campaign. Here, we have hardly bought anything, except the supplies requisitioned in the Free State and Transvaal, for quite six months, and now merchants have stocks so much in excess of their requirements that I can buy really good flour, loaded on the railway, for 8s. 6d. to 9s. per 100lbs."

"Some definite order seems to be required as to the supply of mineral and colza oil for signalling. I have always understood this to be an Army Service Corps supply, but the Army Ordnance Department fancy that they are responsible, and keep wiring home for colza and mineral oil, whereas the Army Service Corps have contracts for both descriptions of oil, and I am constantly sending large supplies of each up country. I have asked the chief Ordnance officer, who seems anxious that the Army Ordnance Department should retain the supply, whether he thinks it worth while cabling home for colza and mineral oil as an Ordnance service when it can be furnished

by the Army Service Corps on the spot, and when the replies to his cablegrams are sent from the Quartermaster General's branch. It seems absurd that one department should claim to supply oil for barrack and another for camp lanterns, but for all I know it may be some special description of oil that is wanted, and which is only obtainable from Woolwich."

"Clayton is laid up with an attack of jaundice and will not be really fit again for a fortnight. He will, I trust, soon recover, as, in my opinion, he is by far the best officer out here in the Army Service Corps, and I do not know how I should get on without him. I am going to take him for a trip round the country when I get Landon back."

"Cape Town, 27th June, 1900. The Boers continue to cut the line between Bloemfontein and the Vaal River two or three times a week, but as this kind of thing begins to grow monotonous I hope the powers that be will stop it by burning the farm or village nearest to the place where the railway or railway line is cut. We are playing the war game with kid gloves on, and this becomes expensive after a bit. I have great difficulty in getting up food to Pretoria consequent upon these constant interruptions in the traffic, and I am hoping Buller will soon connect on with the line to Pretoria, when supplies can be sent through Natal."

"Up to date, we have buried 103 non-commissioned officers and men, Army Service Corps, and invalided 303, not counting Natal, whose returns I have not received yet."

"Lieut.-Colonel Clayton is still sick. Colonel Bridge went off yesterday on a tour of inspection to Pretoria. I would like to have gone with him, but, as soon as Natal is connected by rail with Pretoria, I hope to get up large reserves of supplies into the Transvaal from Natal, and as I know where everything is, and can settle from which depot supplies are to be sent, it is better for me to remain here for the present, especially as the Boers cut the rail about twice a week. It is cut, I believe, at the present moment."

"With regard to further supplies, if sufficient biscuit, preserved meat and lime-juice to complete our reserves to 18,000,000 rations is put on board ship, we shall always have ample to meet our requirements. As regards jam and groceries, we ought to have 28,000,000 rations either in our depots or on the way out. For compressed vegetables and rum, 15,000,000 rations will be ample, as we use rice and buy as many fresh vegetables as possible. As regards tobacco and emergency rations, we have sufficient for many months to come. We want as much forage cake as we can get; it is easy to carry, and everyone is always anxious to get it for their horses. Another 20,000 tins of Queen's chocolate are wanted

for the Colonial troops, from whom I get repeated applications for it. For instance, I kept 600 tins for Baden-Powell, who had under his command some 450 troops paid by the Imperial Government when he was besieged ; now he asks for 1,900 tins. He cannot have more unless more are sent out."

"I am putting Lieut.-Colonels Clayton and Landon in orders as assistant adjutants-general. They well deserve this. It is only a question of pay, as I do not suppose they care twopence whether they are gazetted as assistant adjutants-general or simply graded as such."

"Taking everything into consideration, the War Office have treated us very well in the matter of supplies and transport. The whole situation was saved when the 'Braemar Castle,' in October, 1899, brought out the Army Service Corps companies and officers, as we were able to get a good start of the troops. We also have had the advantage of finding docks and wharves at each of the four ports, which has helped Army Service Corps work enormously. We should have had a far harder task had we landed in an enemy's country, where we should have found no labour, clerical or otherwise."

"The number of Army Service Corps clerks ought to be doubled. We are always running short of good clerks and issuers, and the result is that we kill those we have by overworking them, and accounts and, consequently, financial checks go to the wall."

"The following anecdote affords striking proof of the suitability, both as regards hue and texture, of the service clothing:—

"An officer, who in order not to be dressed differently to the troops had obtained his kit from the quartermaster's stores, reached South Africa, by mail steamer, some few days in advance of his men and spent the interval in studying the topography of the country in the vicinity of Cape Town."

"Among other places he visited Stellenbosch, where, on alighting from the train, he noticed, on a farm in the distance, several large moving objects which a small boy told him were ostriches."

"Never having seen an ostrich farm and being of an inquiring turn of mind, he climbed over a wire fence in order to make a closer inspection. After walking a quarter of a mile or so, he observed that one of the largest birds, evidently a cock, had separated from the others and was approaching him at a rapidly accelerating pace. At the same time, he heard the boy at the station shouting to him either to come back or lie down."

"Dressed as he was in khaki, his sense of dignity unluckily overcame his discretion, and, disdaining to retreat from

a fowl, however large, he assumed a defensive attitude, intending to frighten off the bird with his cane should it come too near: but the ostrich, when ten or a dozen yards away, sprang into the air and striking him on the shoulder with his foot felled him to the ground, where he lay face upwards."

"Thinking the infuriated bird might attempt to peck out his eyes he rolled over on to his face, though not without difficulty, as his collar-bone had been injured in his fall."

"The ostrich—it was the pairing season, when the male birds are very vicious—seeing a quivering form in grey on the ground in front of him, evidently thought some strange bird was seeking a mate; and, while accounts vary so much that it is difficult to ascertain what actually happened, it is confidently asserted that, had it not been for the excellent quality of the material from which the Army Clothing Department at Pimlico manufacture their field service clothing, the unfortunate officer might have experienced great difficulty in escaping even more serious injury."

CHAPTER XI.

The Occupation of the Transvaal up to the Departure of Lord Roberts for England.

By the end of July railway communication between Pretoria and Natal was restored, relieving the congestion which had hitherto existed on the railway between Springfontein and Pretoria, and from this time onward the work of the Army Service Corps was much simplified, as it became possible to keep the depots filled up with considerable reserves of supplies of every description.

During May, June and July, attacks were repeatedly made by the enemy with considerable success on our convoys and supply trains, necessitating the issue, at times, of reduced rations to many of the columns, especially those which were operating in the east of the Orange River Colony.

Further, the Army Service Corps were often heavily handicapped by the abandonment or destruction, owing to the exigencies of the military situation at the moment, of very large quantities of supplies which had been accumulated at various depots in the Free State and Transvaal.

Such incidents are, however, unavoidable in war, and, speaking generally, the troops employed during the campaign have, with the exception of those in Ladysmith during the siege, suffered but little from want of food. On the other hand, owing to the difficulties experienced in getting long trains of supplies over bad roads, through a country inhabited by a hostile population, horses and mules have often received a scanty forage ration. The waste in animals has consequently been considerable.

Extracts from Diary.—"Cape Town, 11th July, 1900. I have been trying to draw up a report on supply and transport services, which headquarters have called for."

"I am having a hard struggle to get up food and forage by rail, as nothing but remounts are now being entrained, and the number of trains which can go forward is so limited that I hardly ever get more than twenty trucks of food through in a day."

"I have just received a wire from Natal to say that they want 15,000 tons of hay for oxen during the winter, which is now upon us. I doubt if they could land and send such a quantity up country, even if it could reach Durban in time. Hay is so bulky that it is almost impossible to get sufficient railway carriage for it."

"I hear from the men who come down country that the cold is intense, and that many of the troops who have worn out their clothes and boots are having a pretty rough time of it."

"I have been looking over the supply and transport establishment we are employing. I find we have 241 Army Service Corps officers, 126 attached officers, 2,900 transport non-commissioned officers and men, 1,300 supply non-commissioned officers and men, 360 civilians employed at supply work (not including the meat contractor's employés), 1,500 civil transport conductors, 16,000 native drivers and 2,000 natives employed at supply depots, 1,600 horses, 36,000 mules, 75,000 oxen and 8,400 vehicles. These numbers seem enormous on paper, but the communications are so long and our depots so numerous that we have not enough transport even now."

"Cape Town, 17th July, 1900. I am beginning to be rather exercised about biscuit and preserved meat. We were told some time ago that we must ask for supplies two months ahead, so that we might receive them in time. We accordingly cabled for biscuit and preserved meat on the 7th June, but up to date, 17th July, none appears to have been shipped, therefore we shall not get any for at least another month, though supplies at some stations are beginning to run short. We are trying to keep up four months' supplies out here, and hoped the War Office would see from our weekly telegraphic states what was on hand, and would send us periodically sufficient to maintain reserves. Some little time back, we were instructed to wire home for whatever we wanted, and I have tried to wire two months ahead for the supplies we were likely to want, but, if two months is not sufficient we ought to wire three months or even more ahead, and then we shall have four months' supplies in our depots and at least three months' on sea or ordered—seven months' in all. With increased demands, principally by medical officers, we hardly ever know ourselves what calls will suddenly be made upon us. I have only to-day been faced with a memorandum that each man in hospital will require a half-pint bottle of porter in addition to the brandy, port wine, whisky, etc. If the patients really drink all that is provided for them they ought to present a very dissipated appearance when they leave hospital."

"This mail, I am sending home a list of medical comforts

in store. I am cabling for a deal more than I consider is really wanted, merely because the principal medical officer has increased the quantities so enormously, and not because I think the sick could ever consume them, even if they all had healthy appetites. Mr. Burdett-Coutt's onslaught has, as I expected, terrified the Royal Army Medical Corps, and the sick, at any rate those near the base, will now very likely begin to suffer from over-feeding."

"Another reverse this week, near Pretoria, puts the conclusion of the war further off than ever. I am somewhat nervous about the supply arrangements in the Orange River Colony and Transvaal, as I cannot get sufficient trucks to send off food and forage in. During the past fortnight, I have had only twenty-eight trucks daily, while the troops must be consuming eighty truck-loads daily. At present, no doubt they can live, to a certain extent, on the foodstuffs available locally, but this will not last for ever."

"We have a happy-go-lucky system on our lines of communication. My General—Forestier-Walker—who carries out a most thankless task with remarkable tact and ability, is responsible only as far as Mafeking and up to the Orange River in the Cape Colony. I communicate, 'by order' of I do not quite know whom, to General Carrington in Rhodesia and to the General of Communications in Natal. I also communicate personally with Ward at headquarters, and I worry the Army Service Corps officers along every line of communication for a weekly state of supplies. So far, everything has jogged along, but when I or some of my tails up country begin to feel their livers, goodness knows what may happen."

"I learnt long ago that you cannot supply an army except from the base, and that if you try and do so from the front you must come to grief, unless you are fighting in a land flowing with milk and honey, and I hardly think even then that 'Tommy' would be long satisfied with such a fluid diet or with so little variety."

"I do not quite understand why supplies are not sent out as we ask, viz., optional to South African ports. On June 7th, we cabled for 4,000,000lbs. of biscuit to be sent out, and in War Office telegram No. 3183, 411,000lbs. are reported to have been shipped, but to Cape Town. Again, we cabled for 500 tons of bran, and we said we were able to take an additional 1,000 tons. Not only have the 500 tons and the 1,000 tons been sent, but another 1,250 tons is on its way to Cape Town, where we do not want it and where we shall have to reshipe it, at a considerable cost, to Port Elizabeth or East London."

"The biscuit and preserved meat we beg for is not sent out, while bran, which we do not want and which will not keep, is forced upon us. The 'Clan Fraser' has arrived with

1,000 tons of bran consigned to Cape Town which will have to be reshipped to East London. It is a separate consignment to those already referred to. As the rainy season is now upon us, delicate supplies will not improve by being landed and reshipped at a sloppy dock, in pouring rain."

"Lieut.-Colonel Clayton has now recovered from his attack of jaundice. I shall probably never know how much I owe him for his assistance during this expedition, on which he has been my right-hand man, and no reward could possibly be too high for him. He is one of the most clear-headed men I have met in the Corps; he has great ability and is hard-working besides."

"I hear from the Director of Railways that over 2,500 trucks, half the entire stock of the Cape Government railways, are now working north of Springfontein. What would happen if the Boers cut the line for a few miles, say somewhere near Bloemfontein, with all our rolling-stock north of that town? I hear that 700 more trucks are on the way out by sea, and I shall be delighted when they arrive, as I shall get the use of some of them. I should like to see the number trebled."

"I am howling for trucks, but cannot get any, as every train is being used to run up mules and remounts. I hear Lord Roberts is moving eastward, and, I fancy, that when we can get hold of Koomati Poort the war will really be near a finish."

"Colonel Ward has done very well indeed. He is tactful and a *persona grata* with the headquarters staff or, at any rate, with many of them, and that goes a long way. Anyhow, I hear no complaints from officers who come down country, and generally the first thing one complains about is one's food."

"Rundle's Division, which has no Army Service Corps staff officer, is, I am told, by far the worst fed in the army, but this may be a libel."

"I shall be anxious for the next three winter months about the transport oxen. In 1881, I lost 75 per cent. of my 'trek' oxen during the winter, and I do not see how we are to prevent a similar loss this year unless the war comes to an abrupt conclusion, which does not seem likely."

By the first week in August, railway communication between Harrismith in the Orange River Colony and Ladysmith in Natal was re-established after the surrender of Commandant Prinsloo and his force to General Hunter, on the 30th July.

On the 26th September Koomati Poort, on the Portuguese border, was occupied by our troops, who were thus

able to cut the enemy's communication with Lourenço Marques. From this port, the Boers had hitherto obtained the greater portion of the imported supplies required for the subsistence of their army.

For some time previous to the occupation of Koomati Poort, Captain Crowe, the British Consul-General at Lourenço Marques, had been making large purchases of provisions, forage, etc., to prevent them reaching the enemy *via* Koomati Poort.

The supplies, which Captain Crowe had accumulated, were now available to be drawn upon by our troops operating on the line between Middleburg and Koomati Poort.

By opening railway communication with Lourenço Marques, *via* Koomati Poort, the Field Marshal Commanding-in-Chief was enabled to forward supplies by rail from any of the five South African ports, viz., Cape Town, Port Elizabeth, East London, Durban and Delagoa Bay, to any station on the lines of communication in the Orange River Colony or the Transvaal.

The state of supplies on the 1st October was as follows :—

STATION.	Garrison.		Quantities of Supplies in Army Service Corps Depots.	Remarks.
	Men.	Horses and Mules.		
<i>Western Line of Communications.</i> —Rhodesia.	1,693	2,077	120 days' supplies.	Distributed at depots along the Beira-Salisbury - Bulawayo - Mafeking line.
<i>Mafeking</i> (including Rustenburg, Zee-rust, Litchenburg, and Ottos Hoop).	3,643	2,898	90 days' supplies for all men and animals fed from Mafeking.	Supplies drawn from Cape Town, <i>via</i> Kimberley.
<i>Kimberley and District</i> (including Modder River, Vryburg, and Boshof, and flying columns to north and west of Kimberley).	15,170	6,810	2,000,000 soldiers' rations and 1,000,000 forage rations.	All supplies drawn from Cape Town.
<i>Orange River and District</i> (including garrisons between Orange River and Modder River, and Colonel Adye's force on north-west border of Cape Colony).	2,220	1,300	500,000 soldiers' rations and 200,000 forage rations.	Do.

SUPPLIES.—*Continued.*

STATION.	Garrison.		Quantities of Supplies in Army Service Corps Depots.	Remarks.
	Men.	Horses and Mules.		
<i>De Aar and District.</i>	2,380	140	500,000 soldiers' rations and 200,000 forage rations.	All supplies drawn from Cape Town.
<i>Cape Peninsula and District from Cape Town to De Aar</i> (including men in hospital, remount depots, drafts, and reinforcements, and prisoners of war).	15,310	2,150	No special reserve kept.	Supplies drawn from base reserve depot, as required.
<i>Midland Line of Communications.</i> —Port Elizabeth, Naaupoort, Norvals Pont.	2,890	1,730	No special reserve kept.	Supplies drawn from base reserve depot, at Port Elizabeth.
<i>Eastern Line of Communications.</i> —East London, Queens-town, Sterkstroom, Bethulie Bridge.	3,720	4,550	No special reserve kept.	Supplies drawn from base reserve depot, at East London.
<i>Orange River Colony.</i> —Springfontein-Bloemfontein - Winburg - Kroonstad line.	27,190	14,020	3,500,000 soldiers' rations and 1,000,000 forage rations.	Supplies drawn from Port Elizabeth and East London.
<i>Transvaal.</i> —Vaal River, J'hannesb'rg, Pretoria, Koomati Poort.	49,010	35,540	6,000,000 soldiers' rations and 1,350,000 forage rations.	Do.
<i>Natal Line of Communications.</i> —Durban, Ladysmith, Newcastle; also, Natal Field force at Middleburg and Harrismith.	86,000	49,000	8 weeks' supplies available.	Supplies drawn from Durban.

Supplies in the hands of the British Consul-General at Lourenço Marques and available for the supply of the troops in the Eastern Transvaal :—

Approximately, 1,000,000 rations preserved meats.

„ 2,000,000 „ breadstuffs.

On November 29th, Lord Roberts handed over the command of the army to Lord Kitchener and proceeded to Cape Town, where he embarked for England.

Between August and November, I proceeded on several tours of inspection of the Army Service Corps establishments on the lines of communication in the Cape Colony, the Orange River Colony, and the Transvaal, returning to Cape Town *via* Natal. I was also engaged in the preparation of reports for the Commander-in-Chief and the General of Communications, and had, therefore, but little time to write up my diary. On December 2nd, I received permission to return to England, and I accordingly embarked, at Cape Town, on December 6th, accompanied by Colonel Bunbury, Lieut.-Colonel Clayton and Captain and Adjutant Atkins.

The supply arrangements during the war have probably been more satisfactory than in any previous campaign. This may fairly be attributed in the first instance to the resource, ability and untiring energy displayed by all ranks of the Army Service Corps.

The careful system of training this corps in every detail of its work, since its reorganisation, in 1889, by Sir Redvers Buller, when holding the position of Quartermaster-General, has produced results far beyond the most sanguine expectations.

It was extremely fortunate that, in September, 1899, Field-Marshal Lord Wolseley, realising the paramount importance of a thoroughly organised supply and transport service, despatched to South Africa, in advance of the troops, an Army Service Corps personnel and equipment sufficient to provide for the requirements of an army corps and a cavalry division.

With this nucleus once fairly started at work, it became a mere matter of detail to arrange for the expansion necessary to provide for the wants of a constantly increasing force.

Another element of success has been that officers and subordinates were not harrassed by having to render the voluminous returns, which in former campaigns have been too frequently required.

To procure provisions and forage it was only necessary for the officers commanding units to enter the numbers of men and animals for whom food was required on the ration indent.

Ready reckoners, in which the quantities of the various items composing any given number of rations could be seen at a glance, were supplied to each unit and to each Army Service Corps officer and non-commissioned officer.

Once a week, a statement of the supplies on hand at each

supply depot along the lines of communication, was telegraphed by the officer in charge to the Director of Supplies at Cape Town.

By means of these statements that officer was enabled to regulate, by cable, the despatch of supplies from England to South Africa and, by telegraph, from coast ports to the various depots.

Again, every effort has been made to maintain large reserves of supplies at the principal strategical points along the extended lines of communication, as soon as railway communication with the coast could be established; while large stocks were collected at coast ports ready to be pushed forward to those points whenever railway trucks became available.

To realise the enormous quantities of supplies required to feed the army in South Africa, the following detail of the provisions, forage and medical comforts, which had always to be maintained at the various depots along the lines of communication, at the coast ports, and in supply ships *en route* to those ports, may be of interest :—

ARTICLES.						APPROXIMATE RESERVE MAINTAINED.	
Biscuits	..	..	..	..	..	20,000,000	lbs.
Flour and meal	..	..	..	..	..	30,000,000	„
Preserved meat and	..	..	..	..	..	20,000,000	„
meat and vege-	..	..	..	..	..	20,000,000	„
table rations	..	..	..	..	..	500,000	„
Cheese	..	..	..	..	..	1,500,000	„
Bacon	..	..	..	..	..	11,500,000	tins.
Pea soup or erbswurst	..	..	..	..	..	700,000	lbs.
Coffee	..	..	..	..	..	350,333	„
Tea	..	..	..	..	..	625,000	„
Chocolate	..	..	..	..	..	55,000	„
Pepper	..	..	..	..	..	1,000,000	„
Salt	..	..	..	..	..	1,000,000	„
Compressed vegetables	..	..	..	..	..	6,000,000	„
Sugar	..	..	..	..	..	8,000,000	„
Jams	..	..	..	..	..	43,750	gals.
Lime-juice	..	..	..	..	..	218,750	„
Rum	..	..	..	..	..	250,000	lbs.
Candles	..	..	..	..	..	140,000,000	„
Hay	..	..	..	..	..	7,000,000	„
Bran	..	..	..	..	..	140,000,000	„
Oats and mealies	..	..	..	..	..	1,000,000	„
Emergency rations	..	..	..	..	..	500,000	„
Tobacco	..	..	..	..	..	28,800	„
Arrowroot	..	..	..	..	..		

ARTICLES.						APPROXIMATE RESERVE MAINTAINED.
Barley	..	..	..	..	..	24,000 „
Butter	..	..	..	..	..	60,000 „
Calf's-foot jelly	..	..	..	..	..	60,000 bots.
Cocoa paste	..	..	..	..	..	48,000 tins.
Condensed milk	..	..	..	..	..	1,000,000 „
Cornflour	..	..	..	..	..	14,000lbs.
Brand's essence and extractum carnis	..	..	..	..	..	19,200 „
Oatmeal	..	..	..	..	..	50,000 „
Sago and tapioca	..	..	..	..	..	26,400 „
Soups	..	..	..	..	..	14,000 „
Roast fowl	..	..	..	..	..	96,000 tins.
Benger's food	..	..	..	..	..	1,000lbs.
Brandy	..	..	..	..	..	110,000 bots.
Champagne	..	..	..	..	..	4,000 „
Port	..	..	..	..	..	5,000 „
Whisky	..	..	..	..	..	2,000 „
Claret	..	..	..	..	..	6,000 „
Ale and stout	..	..	..	..	..	30,000 „

A total gross weight of considerably over 250,000 tons, with a cubic measurement of over 700,000 tons.

The weight of the food and forage required to satisfy the daily wants of the troops in the field amounted to 1,500 tons, without counting fuel. This alone has necessitated the loading of an average of 200 trucks daily, while, in addition, large quantities of supplies have had to be sent forward to form a reserve.

CHAPTER XII.

General Observations and Suggestions.

Before closing these pages, in which I have endeavoured to describe, so far as they came under my personal observation, the difficulties which had to be surmounted by the Army Service Corps during the first phases of the South African campaign, I venture, even at some risk of repetition, to discuss briefly the following points relating to the supply, transport and kindred services which appear to merit the special attention of officers who may, at any future time, be called upon to organise or administer those services :—

SCALE OF RATIONS.

Biscuit.—A biscuit ration of 1 lb. seems somewhat excessive. When the entire ration is issued a portion of it is often wasted, especially by troops who are not actually on the march or performing hard work.

A daily ration of $\frac{3}{4}$ lb. would probably suffice in standing camps, and general officers commanding might be authorised to increase the ration to 1 lb., or even more, whenever a larger ration appeared necessary.

Preserved Meat.—Similarly, the entire ration of 1 lb. preserved meat is seldom eaten; $\frac{3}{4}$ lb. would be an ample ration, if general officers commanding had power to increase it to 1 lb., when required.

Probably nothing tends more to foul camping grounds than the unconsumed portion of the biscuit and meat ration thrown aside by the soldier to breed flies and spread disease during the process of decomposition.

Jam.—A daily issue is much appreciated. Jam as an item of the field ration has probably come to stay.

Tobacco.—A limited supply, say $\frac{1}{4}$ lb. a week, should be issued free to troops located at a distance from a railway line or a supply depot.

Soap.—Soap is an Army Ordnance supply, but, as the Army Ordnance Department have comparatively few depots, the troops are often unable to obtain it. It would be preferable to make soap an Army Service Corps supply; as, wherever there are troops, an Army Service Corps depot, from which a supply could always be obtained, will be near at hand.

Soap should be issued in limited quantities as a free ration in the field. It must be looked upon as a necessity and not as a luxury.

Hospital Supplies.—It is very necessary that medical officers should adhere as closely as possible to the scale of medical comforts fixed upon from time to time by the Director-General Army Medical Services. In practice, it is often found that while one medical officer will issue no stimulant but brandy, by another, only port wine will be used, making it impossible for the Army Service Corps to establish reserves on any definite scale.

Rations for the Civil Population.—In fixing the reserve of supplies to be maintained for the garrisons of towns or villages, which are at all likely to be invested, the wants of the civil population must always be taken into consideration.

PACKING SUPPLIES.

Preserved Meat.—Preserved meat should be supplied in $\frac{3}{4}$ lb. or 1 lb. tins. Larger sized tins are difficult to carry either on the horse or on the person.

Lids to Tins.—The lids of tinned supplies, such as preserved meat, butter, milk, jam, etc., should be secured by a metal band, soldered down and easily torn off by means of either a key or ring.

Wood Cases.—Trade cases are usually too weak to withstand the rough usage they are subjected to, on active service, while Woolwich cases are often unnecessarily strong.

The tare of all packages supplied for use on active service should be reduced to a minimum. The lower the tare the larger the number of rations which can be carried in a given number of vehicles—consequently, a low tare means increased mobility.

Metal canisters might replace the heavy tin-lined biscuit cases, the tare of which often exceeds 60 per cent. of the weight of their contents. Outer wooden cases might be required for their safe transit by sea or by rail, but could be removed when the supplies were loaded on road transport.

In South Africa, the wooden cases were occasionally removed from the biscuit tins to lighten the load on the wagons. This was done during the march to Bloemfentein, but the tin linings proved hardly strong enough to stand the jolting in ox wagons over rough roads.

Circular tins of meat, jam, etc., cause a great waste of space in packing cases. All tinned supplies should be packed in wedge-shaped tins like those containing Chicago beef.

Tea.—It would reduce bulk considerably if tea were supplied compressed in cakes of one or two ounces in weight. A ration of compressed tea could then be readily carried in the mess tin.

Sugar.—One or two-ounce cubes of loaf sugar might be supplied for troops ordered to carry a grocery ration on the person.

Hospital Supplies.—Sago, arrowroot, cornflour and similar supplies should be packed in smaller tins than those at present used. 1 lb. tins would seem a suitable size.

Tobacco.—The cases in which tobacco is usually supplied are much too heavy; 80 lbs. gross should be the maximum weight of such cases.

Marking Cases, etc.—Troops are exposed to undue temptation, and numerous robberies occur, in consequence of cases of spirits, jams, etc., being fully marked with their contents; for instance, Heidsieck, 24 pints; Apricot jam, 48 1 lb. tins. Now, $\frac{C}{24 p.}$ for the 24 pints of champagne, and $48 \frac{J}{1 lb.}$ for the 48 1 lb. tins of apricot jam would afford all the information required by the Army Service Corps. Bottles of wine and spirits might be blown with a W $\blacktriangle$ D on the neck, and a descriptive label affixed to each.

Hay.—With the exception of that pressed at Woolwich much of the hay shipped to South Africa was indifferently secured with weak wire or steel bands, and heavy losses occurred by the breakage of the bands when the hay was landed. Wire bands seem the best, but they should be sufficiently strong, and should be galvanised to prevent rust.

Grain.—Much trouble is experienced in checking consignments of oats and of grain generally when the weights of sacks in the same consignment vary considerably.

For active service, grain should be supplied in strong three or four bushel-sacks containing two or three bushels of grain, respectively. Sacks, filled with as much grain as they can hold, are liable to burst with any rough usage; but with plenty of spare space, this difficulty is not likely to arise, besides which the sacks are much easier to handle.

Bran.—It would be a great advantage if bran could be compressed, when thoroughly dried, into cakes, similar to forage cake.

QUALITY OF SUPPLIES.

Cattle.—Cattle should be inspected by competent veterinary surgeons prior to embarkation. Those shipped to Beira were infected with foot and mouth disease, and had to be destroyed.

Refrigerated Meat.—When railway communication with a coast port exists, refrigerated meat is certain to be largely used in future campaigns to supplement the cattle and sheep available locally. In such cases, it is very necessary that timely arrangements should be made at the commencement of a campaign to provide for the necessary supply of refrigerated meat, for the erection of cold storage, for the manufacture of ice, and for the construction or purchase of suitable railway plant to convey the refrigerated supplies from the coast to the army at the front.

Preserved Meat.—Preserved meat should contain as little salt as is compatible with its keeping qualities.

Meat and Vegetable Rations.—The manufacture of these rations requires careful supervision. A large proportion of those sent to South Africa were found to be unfit for consumption.

Bacon.—Lean bacon only should be supplied. In a warm climate, fat tinned bacon is uneatable, and is besides useless for cooking purposes.

Flour.—Flour requires careful examination, before purchase, to ensure that it does not contain an excess of moisture. Sacks should be shipped under cover during wet weather or when snow is falling. Flour in 100lb. double bags is most suitable.

Cheese.—Cheese that will keep for at least six months in a hot climate should be supplied.

Milk.—Preserved milk requires to be carefully selected, as many brands will not keep good for any lengthened period, in a warm climate.

Sparklets.—Sparklets, for use in field hospitals, are a decided success. If the charges could contain a greater quantity of gas improved results might be obtained.

Emergency Rations.—None of the emergency rations can be said to have been entirely successful. Small separate tins or cakes of compressed tea and chocolate, and of assorted preserved meats and jams, such as are usually sold in canteens for 1d. each, would probably be preferred by the troops.

Candles.—Care should be taken to ensure that candles fit the lanterns supplied; also, that their quality is suitable for the climate in which they are to be used.

Fuel.—Troops should be trained, at home, to use coal in field kitchens. In South Africa, but little wood was procurable, and it took several weeks to accustom troops who had just landed to the use of coal. Meantime, the cooking was badly done and the health of the men suffered. It is hardly possible to carry wood in any large quantity, either by road or rail, on service.

Grain.—Oats, purchased for service use, should not weigh less than 40lbs. to the bushel. Some of the oats shipped from Australasia weighed under 36lbs., whereas the New Zealand oats often weighed as much as 44lbs. per bushel.

Gram.—Amongst the gram shipped from India a pea was discovered which poisoned several of the remount animals.

Hay.—That pressed at Woolwich Dockyard is very good indeed, and the system of pressing it in truss-shaped bales seems to render it impervious to any ordinary rainfall, if reasonable care is taken in stacking and protecting it. It is, however, somewhat difficult to stack owing to the edges of the bales being bevelled off. This excessive bevelling off seems hardly necessary.

The quality of Canadian and North American hay, principally "timothy," is good, but the bales, which vary in weight from 130 to 270lbs., are heavy and unwieldy.

The "Alfalfa" hay from Argentina is chiefly "lucerne," compressed in rectangular bales. It is easy to stack and handle, but, owing to the method of pressing it, moisture is absorbed by the bales if exposed for any time to damp weather, and the hay soon gets mouldy.

Indian hay seems to be of indifferent quality. Most of that sent to Natal was sold for a few pence a bale or wasted, as no animal would touch it.

South African and Australasian oat-hay is preferred by horses and mules to all other hay, but the trade bales are much too large for service use.

Australasian "wheaten" hay, in sheaves, is also in unwieldy bales, and is not readily eaten by horses.

South African "wheaten" chaff is relished by transport mules and oxen.

LATRINE PAPER.

Is required on field service, for use in hospitals. The regulations are not clear as to whether this is an Ordnance or an Army Service Corps supply. As a result, the supply often runs short and the sick and wounded suffer.

SUPPLY ACCOUNTS.

Supply accounts in peace should be assimilated to those for war. The army will then become accustomed to the preparation of the returns which it will be required to render on active service.

On the ration indent, Army Book 55, the weights of supplies drawn need hardly be entered, the number of rations being quite sufficient for all practical purposes.

Every Army Service Corps accountant should have power to draw on the paymaster, through a bank when necessary, money to pay for any supplies or stores he may purchase. Army Book 67 has been used for this purpose during the campaign, but the drafts in this book should be altered so as to form a final voucher in the paymaster's accounts, while at the same time the payee should be able to cash them at a bank.

LOCAL AUDIT OF ACCOUNTS.

The prompt audit, on the spot, of field service accounts is a matter of the first importance.

During the campaign, Army Service Corps officers were appointed to examine and audit supply accounts, and were located at the base. They proved of the greatest utility, and have probably saved the public many hundreds of thousands of pounds.

PAYMENT FOR "COMMANDEERED" SUPPLIES, ETC.

Fair prices should be fixed and paid, on delivery, for all supplies requisitioned from the inhabitants of an occupied district. These prices should be published in orders, for the information of the troops, and posted up in the towns and villages, for the information of the inhabitants. Every effort should be made to induce the farming population to bring in supplies for sale, but, should requisitions for food and forage not be promptly met, the supplies should be "commandeered" by force, if necessary, the owners being given receipts for the quantities obtained and the question of payment being held over until the conclusion of military operations.

SAIL-COVERS.

A thoroughly waterproof sail-cover, fitted with strong grummets, should be sent out on the same vessel with every 100 tons of all supplies likely to damage by exposure to wet weather.

The want of a single sail-cover in the rainy season may often mean the loss of many hundreds of pounds' worth of supplies.

SUPERCARGOES FOR SUPPLY SHIPS.

A supercargo should be on board every supply ship to keep an account of what has been shipped, landed or expended, and what still remains on board. He should be in possession of copies of the bills of lading, and should know in which holds the various supplies are stowed.

CORPS OF LABOURERS.

A corps of labourers to unload supply and store ships, and to stack and load supplies and stores at depots is an absolute necessity on service.

SUPPLY EQUIPMENT.

The technical equipment for supply officers of divisions and brigades is far in excess of what is actually required, and might be reduced as follows:—Felling and pick-axes, spades, butchery valises, miscellaneous panniers and steelyards, by one half, while weighing machines and water-casks might be omitted altogether.

But little supply equipment for the lines of communication was sent out to South Africa in the first instance, while the scale in the equipment regulations for a supply depot

unit was not adhered to, and the Army Ordnance Department were obliged to purchase locally sufficient for twenty units, besides cabling home for ten complete sets in addition. Had not each Army Service Corps unit brought its equipment with it, the supply would have run short. This equipment was not intended for the lines of communication, but for the field army. As, however, the scale was excessive, each set was divided into two, leaving the balance for use on the lines of communication.

In future, supply depot units should be organised at home, and should leave England complete with equipment and stationery on the same scale as for the supply officer of a brigade or division. In addition, a certain number of bulky articles for use at main depots, such as weighing machines, tool chests, hand-barrows, and a considerable number of large-sized waterproof sail-covers, should be consigned direct to the Army Service Corps at the base of operations.

With the exception of camp kettles, the scale of bakery equipment is sufficient. For each section of ten ovens, the number of kettles should be increased to twelve. Folding baking troughs should be supplied; most of those sent out were of the old non-folding pattern, which, for field service use, have been condemned for years past. Each bakery section should embark with its equipment ready to take the field. Considerable delay was caused by having to obtain a large proportion of this equipment from the Ordnance Store Department at Cape Town, while many articles had to be manufactured locally at heavy expense. The Perkins' steam ovens and Groves' travelling ovens did not arrive until six months after hostilities commenced. They would have proved invaluable at De Aar, Naauwpoort, Orange River, Modder River, Sterkstroom and other advanced depots, and would have saved the building of permanent ovens. Steam ovens should be amongst the first stores shipped to the base.

A suitable dough-making machine, to be worked by oil or steam, or by horse-power, would be invaluable on the lines of communication. Those sent out were absolutely useless for any practical purpose, and were so much money thrown away.

Field bakeries should not belong to Army Corps details, but should be established along the lines of communication under the Army Service Corps officers in charge of depots.

TRANSPORT.

Organisation.—For the past twenty years, it has been the practice to allot a transport establishment to each unit with the field army, sufficient to convey a fixed proportion

of ammunition, food, forage, stores, baggage, and camp equipment. This establishment forms a part and parcel of the unit: the officers, non-commissioned officers, and drivers employed with the transport belonging to the unit, and the vehicles, animals, and equipment being on its charge.

This system was no doubt adopted with the view of increasing the mobility of the troops, and with a small force this much-to-be-desired result may often be obtained; but, with any considerable body of troops operating along a single line of communication, it would seem unadvisable to hamper units with a large transport establishment. With the exception of the machine-gun, ammunition and water-carts, and the vehicles carrying cooking utensils and the day's fresh meat and groceries—all of which must in any case accompany the unit—regimental transport will, as a rule, move in rear of the army, and will only be able to rejoin its particular unit when a halt of one or more days can be made. In South Africa, at the commencement of the war, the transport of a single infantry battalion comprised 50 officers, soldiers and native drivers, 15 vehicles (including a machine-gun), and 134 animals.

With an army on the march under the existing system, the supply park obtains supplies from the advanced depot, the brigade supply columns from the supply park, and the regimental supply columns from the brigade supply column, necessitating at least three separate loadings and unloadings of all food and forage consumed.

The greatest difficulty is always experienced by the Army Service Corps in obtaining sufficient fatigue or working parties, on service, and especially so when troops are tired out after an action or a long march. Consequently, the unloading of transport is delayed, the draught animals are exhausted by being kept standing in the yoke or harness, and the mobility of the army suffers.

By abolishing the regimental supply column, and by organising the brigade supply column as a portion of the supply park, sections of which would accompany each division, only one loading and unloading would be necessary.

Day by day, the supply park would hand over so many loaded wagons to the brigade supply columns in return for a similar number of empty wagons, which, as opportunity offered, would be sent back to reload at the advanced depot; while, from the first brigade supply wagons, which reached the troops, when halted at the end of the day's operations, an issue of rations would be made to the units of the entire brigade.

Tents, blankets, waterproof sheets, and camp equipment generally might, when required, be carried in transport

specially allotted to divisions or brigades, with an Army Ordnance officer or subordinate in charge to issue and withdraw the stores, as circumstances rendered necessary.

Further, to ensure absolute mobility, it seems inadvisable to hamper units with transport to carry regimental baggage, but rather to leave such baggage at a suitable post until a convenient opportunity offers to send it forward. When, during active operations, an entire division marches along a single road it will seldom be possible for all the vehicles containing officers' or soldiers' baggage to reach their units at the close of each day's march.

Only ammunition, tools, water, food, forage, equipment, medicines and medical appliances can be considered as necessities, when active operations are actually in progress. At such a time, blankets, baggage and tents will usually have to be looked upon as luxuries.

Over bad roads, in wet weather, the very existence of an army may be jeopardised by a too extended baggage column.

Again, one or more units in a brigade may be detached to occupy a post on the communications, in which case it is a waste of both animals and material to keep such units equipped with a full regimental transport establishment, which is probably urgently wanted elsewhere. If, however, drivers belong permanently to a unit, and animals and vehicles are on regimental charge, difficulties must arise when the whole or any portion of its transport is taken away from that unit.

Ambulances should be on Army Service Corps charge, and the personnel and animals be under the supervision of the officer commanding the Army Service Corps company with the division or brigade to which the ambulances are allotted. When not actually required for medical purposes, the animals should be utilised for general transport work.

Vehicles.—The present service patterns of military transport vehicles are by no means well adapted for service in a country like South Africa, where the roads consist of roughly-defined tracks over the veldt, and where the smallest stream has usually to be crossed at a drift with steep banks on either side.

For such a country, no transport vehicle can improve upon the locally manufactured buck wagon, weighing from 25 to 35 cwt., drawn by 16 oxen, and fitted with a brake in rear of the wheels. These wagons easily carry a load of 6,000lbs. over the worst roads, and will often carry 10,000lbs. on a good road. They are, however, too heavy for mule draught, except in the vicinity of towns, where there is some attempt at road-making, and where rivers are bridged.

By far the most suitable transport vehicles for mule draught are the wagons imported from the United States. The tare of these wagons is light compared with the load they carry. The construction of the fore-carriage, which can be fitted with either drop or stiff tongue gear, is simple, strong and easily repaired. The more stoutly-built wagons, with dead axles, are well adapted to carry loads up to two tons, while the lighter vehicles with a spring over the front axle might with advantage replace the cumbersome forage or "Scotch" carts, as they can carry heavier loads with less exertion to the draught animals.

The wheels of the American wagons are of much lighter construction than our service pattern wheels, and the tires are narrower, but they seem able to stand considerable wear and tear. The diameter of the wheels average 3ft. 8in. and 4ft. 2in., respectively, for the heavier wagon, and some 3 to 4 inches less for the spring wagon.

It is to be hoped that a number of these vehicles may be obtained from the different makers and given an extended trial over rough country at home.

Many of the baggage wagons, ambulances and tongas, brought out by the Yeomanry, were of little use, and were virtually money thrown away. In several instances, the harness supplied with them was of faulty construction, and had to be altered before it could be used. It could hardly have been examined by an expert, before purchase.

The existing wooden barrel water-carts should be replaced by tank water-carts, with a large aperture at the bottom fitted with a plug, and with a cover to fold back so that the interior can be quickly and thoroughly cleansed.

Probably, nothing harbours the germs of disease more than the present type of wooden barrel water-cart.

Our general service ambulances are clumsy and unwieldy, and an amputation case could hardly be carried in them without grave risk to the patient. They might be replaced by ambulance carriages with rubber tires, similar to those used by corporations for infectious cases and to the light ambulance stretchers with bicycle wheels used by the police for street accidents.

Purchase and Manufacture of Harness and Vehicles.—It is very desirable that all local vehicles and harness required for general transport purposes should be purchased by the Army Service Corps, without the intervention of the Army Ordnance Department.

Much inconvenience is caused and considerable delay occurs if, on service, every wagon and set of harness has to be obtained through the Army Ordnance Department.

Being often ignorant of what is really wanted, Army Ordnance officers purchase, or manufacture locally, stores and vehicles, which, on reaching the Army Service Corps, are more or less useless, and consequently public money is wasted.

LANTERNS.

On a journey across the veldt in an ox or mule wagon, the service pattern folding lantern packed in a tin case seldom lasted for more than a fortnight, by which time the jolting of the wagon had broken almost every pane of glass in the lantern. The combination of glass and metal is not satisfactory. A lantern fitted with horn or talc in place of glass would be a great improvement, and enormously reduce the consumption of candles.

TRACTION ENGINES AND MOTOR TRANSPORT.

The army traction engines sent to South Africa were not well suited for field service. They ruined the roads in the towns, causing constant complaints on the part of the municipal authorities. On the veldt, they could not travel more than a few miles away from water. Ploughs, which were quite useless, were supplied with some of them to make trenches, it was understood, for the infantry. The engines were, however, of real use at times in moving heavy artillery from place to place.

Motor carriages, carrying a load not exceeding, say, two tons, will certainly be very largely used as the military transport of the future, while for the quick transport of staff officers and possibly of small bodies of troops with a machine gun, motor cars will probably be generally employed during the next campaign.

Mechanical transport should work under the orders of the officer administering transport duties with the troops in the locality. Friction is likely to arise if it is organised as a distinct service.

CONVEYANCE OF SUPPLIES BY RAIL.

Constantly increasing thefts of supplies and medical comforts occurred on the railways during the war, due to the fact that neither the Royal Engineer officers supervising the railway arrangements nor the Government railway officials working the line, would accept any responsibility regarding the supplies, etc., conveyed by the railway. The Army Service Corps were helpless directly the supplies were loaded on trucks and removed from their charge.

It seems very desirable that an Army Service Corps establishment should be attached to the military railway

administration, on active service, to take charge of the goods department.

SEA TRANSPORT OF TROOPS AND STORES.

Owing to the excellent arrangements made and tact displayed by the naval transport officers, the landing of both troops and stores was, in South Africa, carried out with probably less friction than in any previous campaign. Too much credit can hardly be given to the naval transport officials or to the disembarking staff officers at the various ports. It is very necessary that the offices of the naval transport staff and of the military disembarking staff should be close together and, if possible, under the same roof.

CONVEYANCE OF PRESENTS AND PARCELS FOR SOLDIERS.

The privilege of sending out parcels for soldiers was much abused by the public at home. Useless parcels of old school books, sermons, meteorological reports, papers and periodicals, many years old, were shipped in large quantities to South Africa.

A firm of tobacconists sent hundreds of cases containing small packets of cigarettes and tobacco addressed to individual soldiers, which had to be distributed, at considerable trouble and expense, by the military authorities, who were thereby used as agents to enable the firm to make a profit.

Instances occurred in which bottles of spirits and beer, matches, cooked food—for instance, a pig's head, which arrived in a decomposing state—were sent by their relatives to soldiers serving at the front. By a single vessel as much as 400 tons of parcels would arrive. The ships' agents, who conveyed them free of charge, took no responsibility for them. The parcels were, consequently, pilfered before shipment, during the voyage, and after they were landed. In one instance, out of thirty cases of brandy sent to the Red Cross Society only eight cases reached their destination.

In future campaigns, it would seem advisable that no packages of tobacco, spirits, and food for individual officers or soldiers should be sent out except at the owner's expense by ordinary parcels post.

All presents should be for general distribution at the discretion of the military authorities on the spot. The cases containing them should be securely fastened down before shipment, and steps taken to ensure that no dangerous and useless articles are enclosed. A detail of the cases shipped should be entered on bills of lading.

Some limit should be placed on the transmission of parcels, by post, to individual officers and soldiers. A heavy additional strain will be imposed upon the transport service if it is to

be held responsible that many tons of parcels, transmitted by parcel post, reach the officers and soldiers to whom they are addressed. It would be a good rule if no parcels were allowed to leave the line of railway without special permission from headquarters.

PURCHASE OF REMOUNTS.

Remounts, when required in large numbers for war purposes, should be purchased by specification, defining, in addition to limits of height and age, the weight, girth measurement, and the measurement below the knee for each inch of height of the particular class of animal required.

Army Service Corps officers should be employed to purchase animals required for the transport service, and should make all arrangements for taking up freight and for the supply of forage during the voyage.

Freight should be taken up at a rate, per head, for each animal landed, in preference to chartering vessels for the voyage, a small commission being given to the master of the transport conveying the animals for each horse or mule landed in good condition at the port of disembarkation.

SICK HORSE DEPOTS.

Sick horse depots should be directly under the remount administration, and should be located near the base of operations, where ample supplies of forage will usually be available. If established at any distance from the base the supply of forage available will often be insufficient, as the demands upon the transport by road or rail will seldom admit of forage being carried except for serviceable animals.

Animals not likely to be fit for service for several months should be immediately destroyed or otherwise disposed of. Great waste of forage occurs and the transport service is subjected to an unnecessary strain when large numbers of useless animals are retained in sick horse depots for several months and then shot or sold for a few shillings.

ARMY SERVICE CORPS ADMINISTRATION.

After every campaign, the question is raised whether the supply and transport services should be under a joint or under separate administrations.

It is needless here to repeat the many arguments for or against either system: but, from the Army Service Corps point of view, a joint directorship must tend to increase the efficiency of the two services.

For, without transport, the supply service is at a standstill,

while draught animals cannot move without food and the transport is consequently dependent upon the supply service. The two services must, therefore, run hand in hand.

The officer administering a separate transport service would be certain to complain that his draught animals were inefficient owing to the failure of the supply department to furnish him with the requisite forage, while the officer administering a separate supply service would be inclined to retaliate that he could not be expected to furnish forage if the transport department would not supply him with sufficient wagons to carry it.

Even in civil life, the butcher, baker and grocer find it economical to supply their customers in their own carts.

With separate administrations a Director of Supplies, at all chary of his reputation, would endeavour to contract for supplies to be delivered at the station where the troops would be likely to require them. To effect this, the supply contractors would have to hire transport for which they would have to compete with the transport officials in the local markets, and prices would be raised all round. This actually happened on more than one occasion, in South Africa, on the railways; for instance, compressed forage, which had been brought by train from East London in trucks allotted to the civil population, had to be purchased at exorbitant rates from local merchants by the Army Service Corps officer, at Bloemfontein, who had run out of forage owing to the railway administration having been authorised to allot, for private traffic, trucks which were urgently required for the conveyance of Government supplies.

INDIAN NATIVE ESTABLISHMENT.

It might lead to a considerable economy both in men and money, if some amalgamation between the Army Service Corps and the Indian Commissariat could be effected.

Our army (outside India) is constantly serving in warm climates where European subordinates are unable to work with the same energy as in colder latitudes.

In such localities, the Army Service Corps have no trained native establishments to carry out the many services required by an army, in peace or war, such as scavenging, water carrying, labour in supply establishments, syces in remount establishments and sick horse depots, drivers and artificers with transport animals, store-keepers, issuers and clerks.

Consequently, the work of the Army Service Corps is often much hampered owing to the impossibility of obtaining on the spot the services of thoroughly reliable subordinates whose health is not likely to be affected by work under a tropical sun.

ARMY SERVICE CORPS.

Pay.—The station system of paying non-commissioned officers and men has quite broken down when submitted to the test of active service. Each soldier should be in possession of a last pay certificate book somewhat similar to Army Book 41, which has been used with great advantage by the Army Service Corps for the payment of civilians and natives. Such a book would enable the soldier to receive pay at any station, whether serving with his unit or not. Field-paymasters might accompany each army to issue pay to troops, as required from time to time, but captains and adjutants should, in the field, be relieved from all but the simplest work connected with cash accounts. Soldiers' accounts, on service, should be compiled by paymasters stationed at home or at the base of operations from vouchers shewing the amounts actually paid by captains to individual soldiers, which could periodically be furnished to them from the field army.

Clothing and Equipment.—For the Army Service Corps, on field service, a cape reaching well down below the knee would be preferable to a cloak or great coat. Such capes were supplied to some of the Yeomanry units in South Africa.

The most suitable kit, for both mounted and dismounted men in a working corps like the Army Service Corps, would be a thick woollen jersey, what is known as a "coat, British, warm, flannel-lined," for cold weather, and a pair of knicker-bocker breeches, in place of pantaloons or trousers, with a large pocket over the buttocks. Knee boots should never be taken on service. Stowhasser gaiters are preferable to puttees, which soon get lost as the ties do not last any time, but the best gaiter I have yet seen was shaped like the top of a knee boot. It had to be put on before the ankle boot and was then strapped down over it.

Strong woollen hose would be preferable to puttees for dismounted men.

Blankets should be fitted with eyelet-holes. They can then be used as a shelter from either heat or wet, or as a sleeping blanket. If they were waterproof on one side like a carriage rug it would be a great advantage.

Water bottles should have much wider mouths to enable the inside to be inspected and cleaned.

After a few months' use the interior of the service water bottle is often covered with mould, which smells offensively and is, very possibly, a fertile source of disease.

Regimental Documents.—The documents of officers, non-commissioned officers and men should be left either at home or at the base.

Soldier Clerks.—Every effort should be made to enlist clerks who are typists and shorthand writers. They are invaluable on service. Special promotion might be given to those who are expert.

BILLETING AND IMPRESSMENT ACT.

Some such an Act should be in force in all colonies to enable Imperial troops to requisition transport or supplies, or claim billets at reasonable rates through civil magistrates, without having recourse to martial law. The Burgher Laws of Natal and the Cape Colony apparently only authorise the impressment of wagons and supplies by Colonial troops, and are not applicable to Imperial troops, even when Colonial troops are acting in concert with them.

CONTRACTS FOR SUPPLIES, ETC.

Pamphlets, containing forms of agreement suitable to the locality, should be furnished to Army Service Corps and other officers proceeding on active service. These forms of agreement should include, amongst other services :—

The hire of civilian conductors, drivers, labourers, and others.

The hire of transport, by time or by the trip.

The purchase of animals, vehicles, harness, etc.

The hire of land, for grazing or camping.

The hire of buildings, for the accommodation of the troops or for the storage of goods.

The purchase of provisions, to be supplied—(i) in fixed quantities by a given date, and (ii), as required, during a fixed period.

The purchase of animals, supplies or stores, not available on the spot, to be shipped from a distant port, and to be consigned or delivered by a given date f.o.b. or c.i.f. at a named port.

One of the conditions of each locally made agreement should be that any dispute, which may arise, must be referred to a committee of officers whose decision, when approved by the general or other officer commanding, shall be final and binding on all parties.

Heavy loss to the public is often caused owing to agreements being hastily entered into by inexperienced officers.

SPECIAL PURCHASES AND SERVICES.

Schedules of the supplies and stores they purchase or requisition, and of the transport they requisition or hire, should be forwarded by Army Service Corps officers at least once a

month to the Director of Supplies at the base of operations. From an examination of these schedules, the latter officer will be able to ascertain whether exorbitant prices are being paid in a particular district, as well as to estimate the quantity of supplies, etc., likely to be procurable in the theatre of military operations. Paymasters should be instructed not to pass bills for payment, unless they have passed through a schedule of special purchases.

WAR OFFICE CORRESPONDENCE.

Several typed copies should accompany any important War Office letters sent to the seat of war, in order to save the clerical labour involved in preparing locally copies of communications, which require to be passed by the recipients to other offices. The number of copies forwarded should be noted on the margin of the original letter.

WAR OFFICE ADVISER.

A Treasury or War Office official should be appointed as financial adviser to the General Commanding when any important operations are in progress.

He should be in a position to afford the General advice on financial questions which frequently arise, on service, and which may involve the expenditure of large sums of public money.

STATIONERY.

A branch of the Stationery Office should accompany the first troops who proceed to the base of operations. A considerable number of typewriting machines should be supplied. The arrangements for the supply of stationery during the campaign have proved a great success.

MAPS.

The best maps available should be supplied to every officer. They should be printed on linen or calico, as those on thin paper soon turn to pulp in the rain.

REGIMENTAL QUARTERMASTERS.

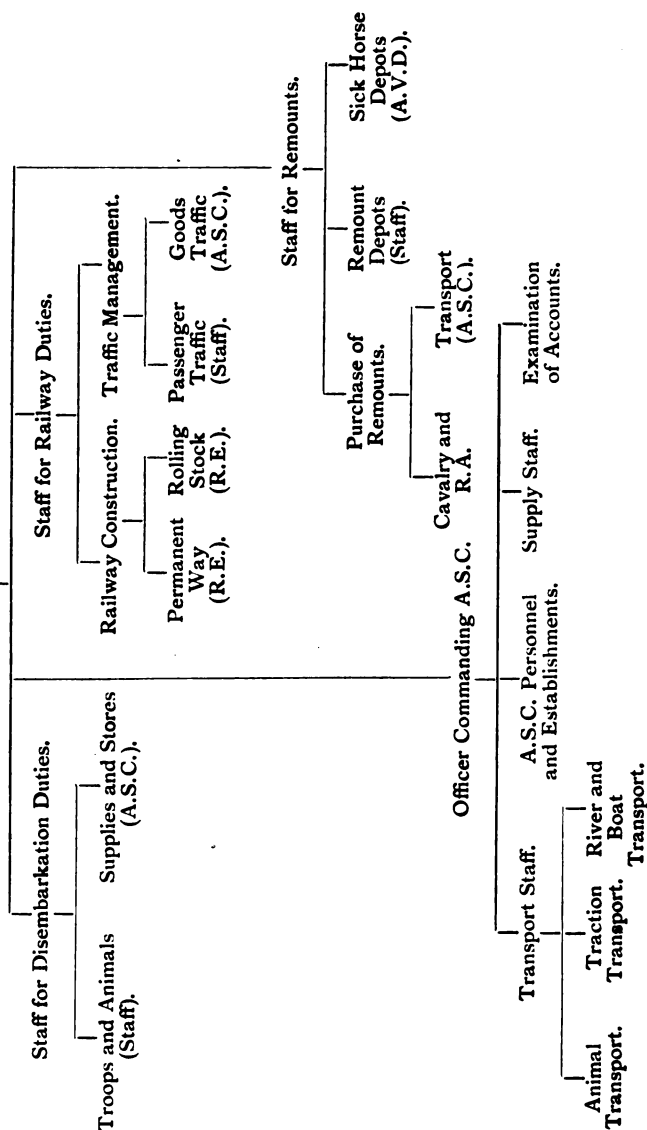
It would be an excellent plan to post all regimental quartermasters to the Army Service Corps, on first appointment. They might remain in the Army Service Corps throughout their service, and be attached to units, as required, from time to time. In the event of a unit being detached, the regimental quartermaster would then be competent to undertake supply work without further assistance from the Army Service Corps.

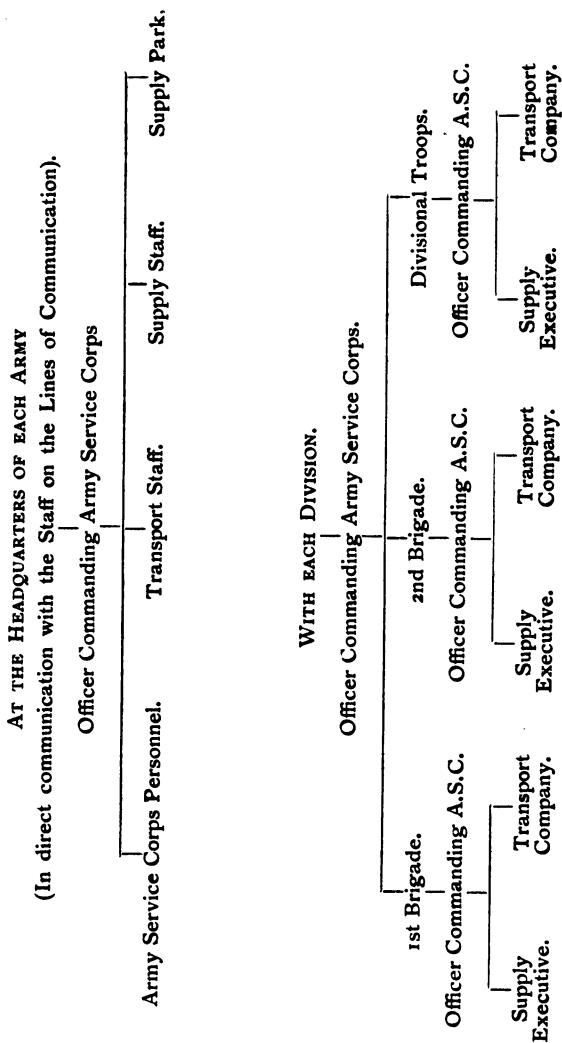
DISTRIBUTION OF SUPPLY AND TRANSPORT DUTIES.

The following distribution of Supply and Transport duties is suggested by the experience gained during the South African campaign :—

ON THE STAFF OF THE GENERAL OF COMMUNICATIONS.

A General Officer (of considerable administrative experience and ability).





The senior Army Service Corps officer posted to a division should hold Colonel's, or at any rate Lieut.-Colonel's, rank. In a cavalry division, this officer should have several assistants, to be employed with patrols in collecting cattle, supplies and transport for the use of the army as it advances. The senior Army Service Corps officer posted to a Brigade should hold Field Rank.

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